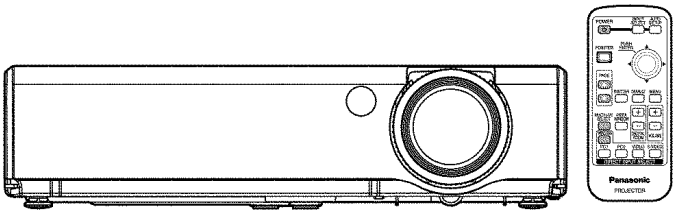
ORDER NO. VED0604370C0
D10

Service Manual

LCD Projector



PT-LB60NTU
PT-LB60NTE
PT-LB60NTEA
PT-LB60U
PT-LB60EA
PT-LB55NTE
PT-LB55NTEA
PT-LB55EA

Panasonic

The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

Specifications

Power supply: 100 V - 240 V AC, 50 Hz / 60 Hz
Power consumption:
300 W [During standby (when fan is stopped): Approx. 3 W]
Amps: 3.5 A - 1.8 A
LCD panel:
Panel size (diagonal):
PT-LB60NT**/LB60**: 0.8 type (20.32 mm)
PT-LB55NT**/LB55**: 0.7 type (17.78 mm)
Aspect ratio: 4:3
Micro lens array: Available
Display method: 3 transparent LCD panels (RGB)
Drive method: Active matrix method
Pixels: 786 432 (1 024 × 768) × 3 panels
Lens:
Manual zoom (1.2x) / Manual focus
F 1.7 - 1.8, f 24.0 mm - 28.8 mm
Lamp: UHM lamp (220 W)
Luminosity:
PT-LB60NT**/LB60**: 3 200 lm
PT-LB55NT**/LB55**: 2 500 lm
Scanning frequency (for RGB signals):
Horizontal scanning frequency: 15 kHz - 91 kHz
Vertical scanning frequency: 50 Hz - 85 Hz
Dot clock frequency: 100 MHz or less
$Y P_B P_R$ signals:
480i, 480p, 576i, 576p, 1 080/60i,1 080/50i, 720/60p
Color system:
7 (NTSC / NTSC 4.43 / PAL / PAL-M / PAL-N / PAL60 / SECAM)
Projection size: 838.2 mm - 7 620 mm
Throw distance:
PT-LB60NT**/LB60**: 1.1 m - 10.8 m
PT-LB55NT**/LB55**: 1.2 m - 12.0 m
Optical axis shift:
PT-LB60NT**/LB60**: 6:1 (fixed)
PT-LB55NT**/LB55**: 9:1 (fixed)
Screen aspect ratio:
4:3
Installation(Menu selection):
Front/Desk, Front/Ceiling, Rear/Desk, Rear/Ceiling
Speakers:
4.0 cm × 3.0 cm oval × 1
Max. usable volume output:
1 W (monaural)
Wireless LAN (PT-LB60NT/LB55NT** only):**
IEEE802.11b/g
Connectors:
PC IN / OUT: Dual-line, D-sub HD 15-pin (female)
(One line is available for input and output, selectable using an on-screen menu)
During $Y P_B P_R$ input/output:
Y: 1.0 V [p-p] (Including sync), 75 Ω
$P_B P_R$: 0.7 V [p-p], 75 Ω
During RGB input/output:
RGB: 0.7 V [p-p], 75 Ω
G.SYNC:1.0 V [p-p], 75 Ω
HD, VD: TTL, automatic positive/negative polarity compatible
VIDEO IN: Single-line, RCA pin jack
1.0 V [p-p], 75 Ω
S-VIDEO IN: Single-line, Mini DIN 4-pin
Y 1.0 V [p-p], C 0.286 V [p-p], 75 Ω,
AUDIO IN (for S-VIDEO/VIDEO):
Single-Line, RCA pin jack × 2 (L-R)
0.5 V [rms]
PC AUDIO IN:
Dual-Line, M3 jack (Stereo MINI)
0.5 V [rms]
VARIABLE AUDIO OUT:
Single-Line, M3 jack (Stereo MINI)
0.5 V [rms]
(Monitor output/stereo compatible)
0 V [rms]-2.0 V [rms] (variable)
SERIAL: DIN 8-pin RS-232C compatible
Cabinet:
Molded plastic (PC/ABS)
Dimensions:
Width: 327 mm
Height: 83 mm
Length: 233 mm (without lens cover)
Weight:
PT-LB60NT**/LB55NT: 2.6 kg
PT-LB60**/LB55**: 2.5 kg
Operating environment:
Temperature: 0° C - 40° C
(when "HIGHLAND" is set to "ON" : 0° C - 35° C)
Humidity: 20 % - 80 % (no condensation)
Certifications:
PT-LB60NTU, LB60U:
UL60950-1, C-UL, FCC Class B
PT-LB60NTE/EA, LB60EA, LB55NTE/EA, LB55EA:
EN60950-1, EN55022, EN61000-3-2, EN61000-3-3, EN55024

<Remote control unit>

Power supply:
3 V DC (AAA battery × 2)
Operating range:
Approx. 7 m
(when operated directly in front of signal receptor)
Dimensions: Width: 51.5 mm
Height: 21.1 mm
Length: 123 mm
Weight: 74 g (including battery)
Accessories:
Remote control unit
PT-LB60NT**/LB55NT** (N2QAYA000001): 1
PT-LB60**/LB55** (N2QAYA000002): 1
AAA battery for remote control unit (x2) : 1
Power cord:
PT-LB60NTU/LB60U:
K2CG3DR00006 1
PT-LB60NTE/LB55NTE:
K2CM3DR00002 (continental) 1
PT-LB60NTEA/LB60EA/LB55NTEA/LB55EA:
K2CT3DR00005 (U.K) 1
K2CM3DR00002 1
RGB signal cable [K1HA15DA0002 (1.8 m)]: 1
CD-ROM (PT-LB60NT**/LB55NT** only)
TQBH9008 1
Carrying bag (TPEP019): 1
Options:
Ceiling bracket: ET-PKB30
Wireless remote control unit: ET-RM300
Serial adapter (DIN 8-pin/D-sub 9-pin): ET-ADSER

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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- Macintosh is a registered trademark of Apple Computer, Inc.
- S-VGA is a registered trademark of the Video Electronics Standards Association.

All other trademarks are the property of the various trademark owners.

Precaution

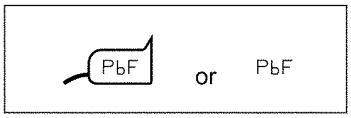
If using of this projector at high elevations (above 1 400 m), set HIGHLAND to ON. (Refer to "Option settings" in Operating Instructions.)
Failure to observe this may cause malfunctions.
Never use this projector at an elevation of 2 700 m or higher.
Using this projector at high elevations, consult your dealer or Authorized Service Center about preparations.

About lead free solder (PbF)

This projector is using the P.C.Board which applies lead free solder. The use of lead free solder is recommended from the standpoint of antipollution for the global environment in service.
Notes:

- Lead free solder: Sn-Ag-Cu (tin, silver and copper) has a higher melting point (approx. 217°C) than standard solder. Typically, the melting point is 30°C to 40°C higher. When servicing, use a high temperature soldering iron with temperature limitation function and set it to 370±10°C.
- Be precautions about lead free solder: Sn-Ag-Cu (tin, silver and copper) will tend to splash when heated too high (approx. 600°C or higher).
- Use lead free solder for the P.C.Board (specified on it as "PbF") which uses lead free solder. (When you unavoidably use lead solder, use lead solder after removing lead free solder. Or be sure to heat the lead free solder until it melts completely, before applying lead solder.)
- After soldering to double layered P.C.Boards, check the component side for excess solder which may flow onto the opposite side.

About the identification of the lead free solder P.C.Board
For the P.C.Board which applies lead free solder, the symbol as shown in the figure below is printed or stamped on the surface or the back of P.C.Board.



For US

IMPORTANT SAFETY NOTICE

There are special parts used in Panasonic LCD Projectors which are important for safety. These parts are shaded on the schematic diagram. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY.

WARNING:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any unauthorized changes or modifications to this equipment will void the users authority to operate.

CONTENTS

1 Safety Precautions

1.1. General Guidelines

- For continued safety, no modification of any circuit must be attempted.
- Unplug the power cord from the power outlet before disassembling this projector.
- Use correctly the supplied power cord and must ground it.
- It is advisable to use an isolation transformer in the AC power line before the service.
- Be careful not to touch the rotation part (cooling fan, etc.) of this projector when you service with the upper case removed and the power supply turned ON.
- Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.
- After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.
- After the service, check the leakage current to prevent the customer from getting an electric shock.

1.2. Leakage Current Check

1. Prepare the measuring circuit as shown in Fig.1.

   Be sure to use a voltmeter having the performance described in Table 1.

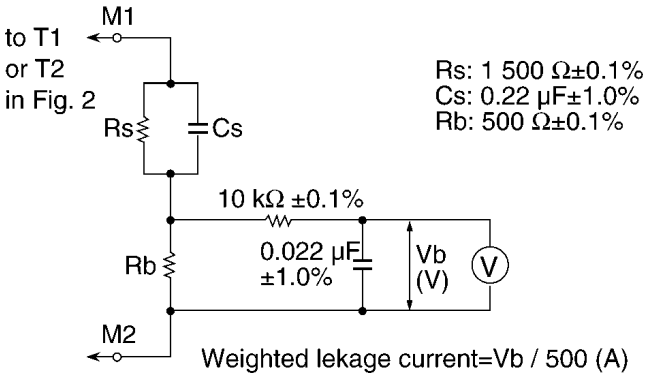


Fig. 1

	Performance
Voltmeter (rms reading)	Accuracy: ≤ 2% Input resistance: ≥ 1 MΩ Input capacitance: ≤ 200 pF Frequency range: 15 Hz to 1 MHz

Table 1

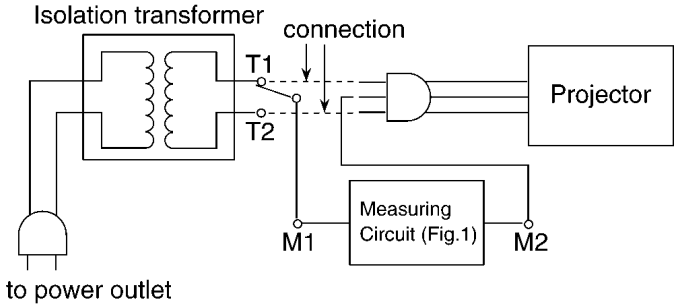


Fig. 2

2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.
3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
4. Change the connection of M1 from T1 to T2 and measure the voltage again.
5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4. This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

1.3. UV Precaution and UHM Lamp Precautions

- Be sure to unplug the power cord from the power outlet when replacing the lamp.
- Because the lamp reaches a very high temperature during its operation, wait until it cools completely when replacing the Lamp Unit.
- The lamp emits small amounts of UV-radiation, avoid direct-eye contact with the light.
- The lamp unit has high internal pressure. If improperly handled, explosion might result.
- Because the high pressure lamp involves a risk of failure, never touch the lamp wire lead during the service. (See Fig. 3)

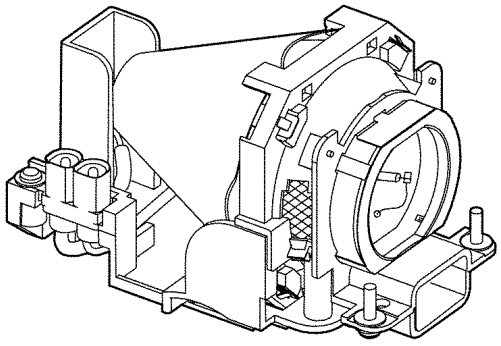


Fig.3

2 Ext Option

This projector has EXT OPTION in addition to standard on-screen menus.

・There are SELF CHECK and TEST PATTERN for service, etc.

2.1. Procedure to enter EXT OPTION

1. Press "MENU" button on the main unit or remote control unit to display "MENU" screen, then select "OPTION" and press "ENTER" button.
2. Select "INPUT GUIDE" on "OPTION" menu and press "ENTER" button 3 seconds or longer.

   MENU → OPTION → INPUT GUIDE

2.2. EXT OPTION Menu and Functions

EXT OPTION

FREEZE MESSAGE	OFF / ON
ANGLE RESET	OFF / ON
FAN FULL MODE	OFF / ON
AUTO SETUP	STANDARD / SPECIAL
SYNC	STANDARD / SPECIAL
VGA60/480p	AUTO / VGA60 / 480p
SELF CHECK	
TEST PATTERN	
FLICKER ADJUST	
HPLL	OFF / ON

・FREEZE MESSAGE

Switching ON/OFF "FREEZE" on-screen display

・ANGLE RESET

Switching ON/OFF "Realtime Keystone" reference level setting

Note:

– Normally, do not select. (Angle reset data will be rewritten.)

・FAN FULL MODE

Setting the cooling fan motor rotation speed

– Switching ON "FAN FULL MODE", the rotation level of the fan becomes high-speed rotation (fixed). Moreover, when "FAN FULL MODE" is ON, changing "HIGHLAND" in OPTION becomes impossible (setting "FAN FULL MODE" is given priority more than "HIGHLAND").

・AUTOSETUP

Setting AUTO SETUP mode

– STANDARD: To set the normal mode (the dot clock is adjusted strictly))

– SPECIAL: To set the special mode (the dot clock is adjusted roughly)

Note:

– Do not change the initial setting (STANDARD).

・SYNC

Setting SYNC processing mode

– STANDARD: To set the normal mode

– SPECIAL: To set the special mode (noise reduction mode)

Note:

– Do not change the setting when it is possible to receive normally.

Change the setting only when the image is not displayed normally because of the sync signal noise of connected equipment.

・VGA60/480p

– AUTO: Switching RGB of VGA60 and 480p automatically

– VGA60: Inputting signals in 59.9Hz / VGA480

– 480p: Inputting signals in RGB of 480p

・SELF CHECK

To enter the self-check mode

・TEST PATTERN

To display test patterns

・FLICKER ADJUST

To enter the flicker adjustment mode

・HPLL

When non-standard signal of VIDEO/S-VIDEO is inputted (VTR, VHD, etc.), horizontal synchronization might be disordered according to connected equipment. In this case, set HPLL to OFF.

2.3. Canceling EXT OPTION

Press "MENU" button on the main unit or remote control unit.

3 Self-Check Mode

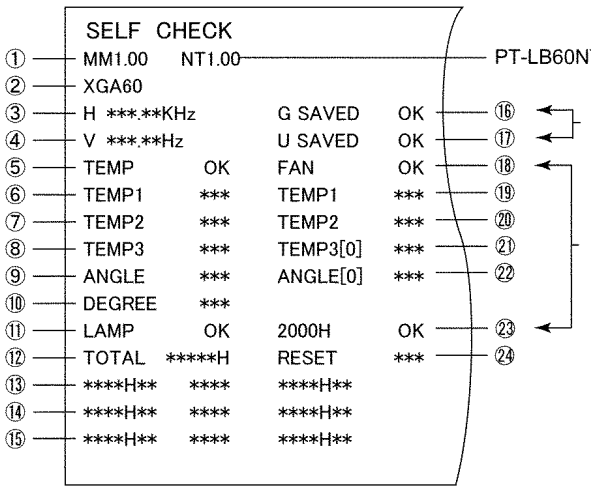
This mode is used to narrow down the location of the failure.

3.1. Procedure to enter the self-check mode

Select "SELF CHECK" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

3.2. Self Check Display and Contents

Display example



PT-LB60NT**/LB55NT** only

* This display is an example and the display contents depend on the input signal mode.

- The result of items "G SAVED" and "U SAVED", "OK" is displayed for OK and "NG" is displayed for NG.
- The result of items "TEMP", "FAN", "LAMP" and "2000H", the OK display becomes red characters when shutting down because abnormality happened last time.

	Display Contents	Remarks	
①	Microcomputer Version Display	Software Version	
②	Resolution Name	Different display according to the input signal	
③	Horizontal Signal Frequency	RGB or YP_BP_R signal reception only	
④	Vertical Signal Frequency		
⑤	Temperature Abnormality Check	Cause of Lamp Malfanction	
⑥	Thermosensor 1 Measurement Value *1	Around Air Outlet (A/D conversion value: 0 - 255)	
⑦	Thermosensor 2 Measurement Value *1	Around Air Inlet (A/D conversion value: 0 - 255)	
⑧	Thermosensor 3 Measurement Value	Around Tilt Sensor (A/D conversion value: 0 - 1 023)	
⑨	Tilt Sensor Measurement Value	Voltage Value (0.00 - 3.30)	
⑩	Tilt Degree *2	Degree of tilt of the projector, that is a value by which temperature correction is given to the tilt sensor A/D conversion value. (When realtime keystone, the keystone distortion is corrected with this value.)	
⑪	Lamp - Abnormality Check	Cause of Lamp Malfanction	
⑫	Total Usage Time	Projector Cumulative Usage Time	
⑬	Lamp ON - Cumulative Usage Time / Frequency / Cumulative Usage Time	Current	Cumulative Usage Time (actual time), ON Frequency and Cumulative Usage Time (conversion time for 220 W) of the lamp are shown from the left.
⑭		Second	
⑮		First	
⑯	Gamma Correction Data Check	It is distinguished whether gamma data is stored in the flash ROM.	
⑰	Color Unevenness Correction Data Check	It is distinguished whether color unevenness correction data is stored in the flash ROM.	
⑱	Fan Stop Check	Cause of Lamp Malfanction	
⑲	Thermosensor 1 A/D Conversion Value	Temperature around the air outlet when the last thermal shutdown occurs	
⑳	Thermosensor 2 A/D Conversion Value	Temperature around the air inlet when the last thermal shutdown occurs	
㉑	Thermosensor 3 Reference Value	Thermosensor 3 A/D Conversion Value (0 - 1 023) at angle reset	
㉒	Tilt Sensor Reference Value	Tilt Sensor Voltage Value (0.00 - 3.30) at angle reset	
㉓	Lamp - Judgment for Cumulative Usage more than 2 000 h *3	Judgment for Replacement Time of Lamp	
㉔	Lamp - Reset Frequency of Cumulative Usage Time	Reset Frequency (0 - 255)	

*1 When detected abnormal temperature (high temperature around the air inlet and/or outlet ports, large difference between temperature around the air inlet/outlet ports), TEMP indicator turned on. If arriving at the critical temperature, the power supply will be shutdown automatically and the indicator will flash.

*2 When "Realtime Keystone" is set to ON, the keystone distortion is corrected automatically with this value during automatic setup.

*3 Warning of the lamp cumulative usage time and shutdown use the conversion time for 220 W.

3.3. Canceling the self-check mode

Press "MENU" button on the main unit or remote control unit.

4 Test Pattern

This projector displays seven kinds of test patterns [Horizontal lines, Vertical lines, Dots, Crosshatch, White cross, Black cross and White (No pattern)] in the four colors (White, Red, Green and Blue).

Note:

- Because the above patterns can be displayed by each color without test equipment such as PC or SG, use it for simplified adjustments by your eyes and so on.

4.1. Procedure to display test patterns

Select "TEST PATTERN" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

- On the test pattern screen, pressing the up-arrow " ▲ " or down-arrow " ▼ " button allows the test pattern selection and the left-arrow " ◀ " or right-arrow " ▶ " button the color selection (White / Red / Green / Blue).

4.2. Canceling the test pattern display

Press "MENU" button on the main unit or remote control unit.

5 Flicker Adjustment Mode

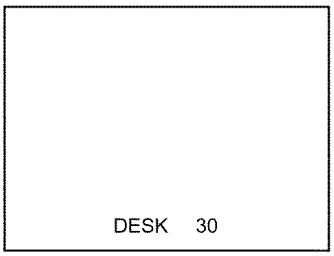
If replacing the optical parts (Analysis / LCD / Lens block) of this projector and/or A-P.C.Board (assembly), enter the flicker adjustment mode and minimize the flicker.

5.1. Procedure to enter the adjustment mode

Select "FLICKER ADJUST" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

"DESK setting (blue)" is displayed when entering the adjustment mode.



Adjustment Display when DESK setting

5.2. Adjustment Display and Contents

- Setting value is increased and decreased with the right-arrow " ▶ " and left-arrow " ◀ " buttons.
  " ◀ ": Decrease, " ▶ ": Increase
  – Adjust the setting value to minimize the flicker on the screen.
  – Execute the adjustment by 6 patterns below.
- The pattern (adjustment display) is switched with the up-arrow " ▲ " and down-arrow " ▼ " buttons.
  " ▲ ": Forward direction, " ▼ ": Reverse direction
  – There are 6 patterns of "DESK setting (blue)", "DESK setting (red)", "DESK setting (green)", "CEILING setting (blue)", "CEILING setting (red)" and "CEILING setting (green)".
  – The setting value is saved into this projector when the pattern is switched.

5.3. Canceling the flicker adjustment mode

Press "MENU" button on the main unit or remote control unit.

Note:

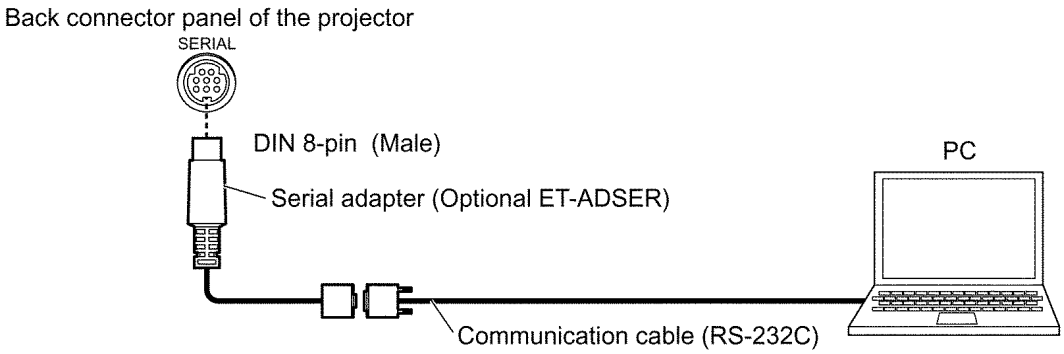
When "MENU" button is pressed, the setting value at that time is saved into this projector and the adjustment mode is canceled.

6 Using the SERIAL Connector

The serial connector which is on the back connector panel of the projector conforms to RS-232C standard. This projector can be controlled by a PC which is connected as shown in "6.1. Connection".

For controlling this projector by a PC, requires communication software on the market, and inputs control commands according to communication settings and basic format below.

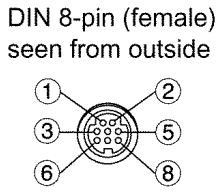
6.1. Connection



Note:

Use a proper communication cable which is suitable for the PC to connect the optional serial adapter, which is connected with SERIAL connector of this projector, and the PC.

6.2. Pin Layout and Signal Names for SERIAL Connector



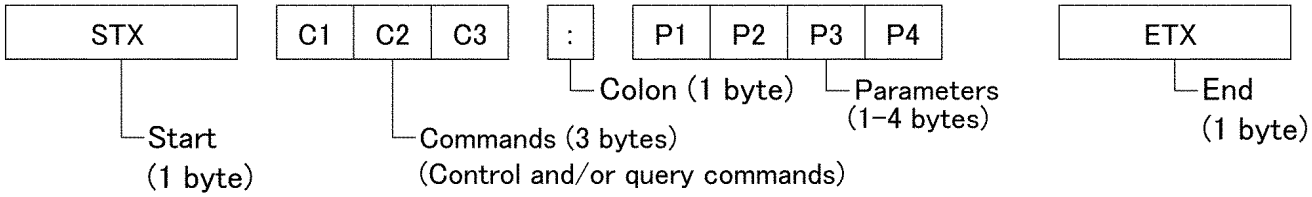
Pin No	Signal Name	Contents
3	RXD	Receive data
4	GND	Ground
5	TXD	Transmit data
1	---	Connected internally
2	---	
6	---	
7	---	NC
8	---	NC

6.3. Communication Settings

Signal Level	Contents		Description
Sync. method	Conforms to RS-232C standard	Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate		9 600 bps	Data transfer speed
Parity		None	Error detection method
Character length		8 bits	Number of bit composing 1 character
Stop bit		1 bit	Uses stop bit when asynchronous method
X parameter		Not used	
S parameter		Not used	

6.4. Basic Format

The data sent from the PC to the projector is transmitted in the format shown below.



Notes:

- If sending multiple commands, check that a call back has been received from the projector for 1 command before sending the next command.
- When a command which does not require parameters is sent, the colon (:) is not required.

6.5. Control / Query Commands

Control Commands

Command Name (Parameter format is shown in < >)	Function / Contents	Call back from Projector (Parameter format is shown in < >)	Minimum Value of Parameter	Maximum Value of Parameter
PON *1	POWER ON	PON	———	———
POF *1	POWER OFF	POF	———	———
AVL :<pl>	VOLUME	AVL :<pl>	0	63
IIS :<input signal>	INPUT SELECT	IIS :<input signal>	———	———
OST	DEFAULT	OST	———	———
OFZ :<off_on>	FREEZE	OFZ :<off_on>	0	1
OEN :	ENTER	OEN	———	———
VPM :<picture mode>	PICTURE MODE	VPM :<picture mode>	———	———
<NAT>	NATURAL	<NAT>	———	———
<STD>	STANDARD	<STD>	———	———
<DYN>	DYNAMIC	<DYN>	———	———
<BBD>	BLACK-BD	<BBD>	———	———
AUU	VOLUME UP	AUU		
AUD	VOLUME DOWN	AUD		
OMN	MENU	OMN		
OCU	CURSOR UP	OCU		
OCD	CURSOR DOWN	OCD		
OCL	CURSOR LEFT	OCL		
OCR	CURSOR RIGHT	OCR		
OAS	AUTO SETUP	OAS		
OSH *1 *3	SHUTTER	OSH		
OIX	INDEX WINDOW (Double)	OIX		
DZU	D.ZOOM UP	DZU		
DZD	D.ZOOM DOWN	DZD		
OLP :<lamp power> *1 *2	LAMP POWER	OLP :<lamp power>	0	1

*1 Do not transmit the PON, POF, OSH and/or OLP commands continuously in a short time. The lamp may be damaged and/or cause malfunctions.

*2 The OLP command is invalid at a no signal.

*3 If a command except OSH is sent from the PC during "SHUTTER" mode, the "ER401" command will be sent from the projector to the PC, and the projector is going to return to normal operating mode.

Query Commands

Query Command	Contents	Call back from Projector (Parameter format is shown in < >)
QPW	POWER CONDITION	〈power condition〉
QIN	INPUT SIGNAL	〈input signal〉
QAV	VOLUME LEVEL	〈pl〉
QVC	COLOR LEVEL	〈pl〉
QVT	TINT LEVEL	〈pl〉
QVB	BRIGHT LEVEL	〈pl〉
QVR	CONTRAST LEVEL	〈pl〉
QVS	SHARPNESS LEVEL	〈pl〉
QWR	WHITE BALANCE LEVEL (RED)	〈pl〉
QWG	WHITE BALANCE LEVEL (GREEN)	〈pl〉
QWB	WHITE BALANCE LEVEL (BLUE)	〈pl〉
QHP	H-POSITION LEVEL	〈pl〉
QVP	V-POSITION LEVEL	〈pl〉
QCP	COLOR PHASE LEVEL	〈pl〉
QDC	DOT CLOCK LEVEL	〈pl〉
QSP	INSTALLATION	〈installation〉
QLG	LANGUAGE	〈language〉
QPM	PICTURE MODE	〈NAT〉＝NATURAL 〈STD〉＝STANDARD 〈DYN〉＝DYNAMIC 〈BBD〉＝BLACK-BD
QFZ	FREEZE	〈off_on〉
QLP	LAMP POWER	〈lamp power〉
Q$L	LAMP ON TIME	〈acctch〉
Q$S	LAMP CONDITION	〈lamp condition〉
QSH	SHUTTER	〈off_on〉
QKS	KEYSTONE	〈pl〉
QTE	COLOR TEMPERATURE	〈color temp.〉

Parameters

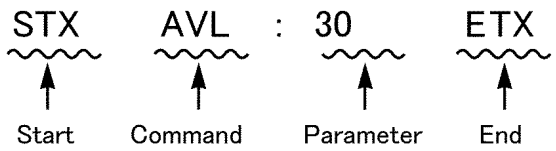
Parameter Format	Parameter Size (Byte)	Parameter Definition
〈pl〉	3 (provided that approves of 1 byte or 2 bytes when control)	Decimal notation without plus/minus sign (0 to 999), Decimal notation with plus/minus sign (−99 to +99) (Returns 3 bytes call back from the projector. Decimal notation without plus/minus sign (000, 001, 002, ..., 999), Decimal notation with plus/minus sign (−99, −98, ..., −01, +00, +01, ..., +99))
〈off__on〉	1	0 = OFF, 1 = ON
〈input signal〉	3	VID = VIDEO, SVD = S-VIDEO, RG1 = PC1, RG2 = PC2 NWP = WIRELESS (PT-LB60NT**/LB55NT** only)
〈installation〉	1	0 = FRONT/DESK, 1 = REAR/DESK, 2 = FRONT/CEILING, 3 = REAR/CEILING
〈language〉	3	ENG = English, DEU = German, FRA = French, ESP = Spanish, ITA = Italian, JPN = Japanese, CHI = Chinese, KOR = Korean, RUS = Russian, POR = Portuguese, SVE = Swedish, NOR = Norwegian, DAN = Danish, POL = Polish, CES = Czech, MAG = Hungarian, THA = Thai
〈power condition〉	3	000 = Power OFF, 001 = Power ON
〈acctch〉	4	Decimal notation without plus/minus sign: 0000 hour to 9999 hours
〈lamp condition〉	1	0 = Standby, 1 = Lamp ON control active, 2 = Lamp ON, 3 = Lamp OFF control active
〈lamp power〉	1	0 = ECO, 1 = STD
〈color temp.〉	1	0 = LOW, 1 = STD, 2 = HIGH

* If an incorrect command is sent from the PC, the "ER401" command will be sent from the projector to the PC.

[Example]

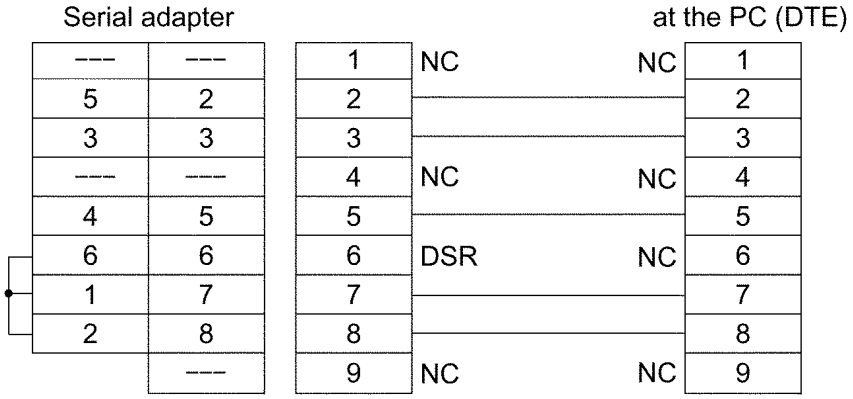
When controls the audio volume to +30 by a PC

(Sends commands as the following:)



・When a command which does not require parameters is sent, the colon (:) is not required.

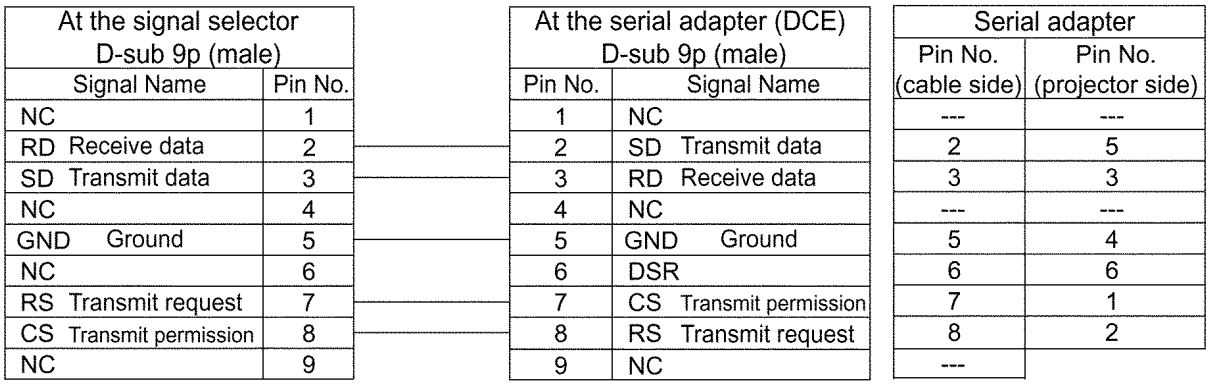
6.6. Communication Cable Specifications



6.7. Signal Selector Connecting Cable Specifications

When connecting to a signal selector (ex. TW-SWS62J), use a cable with specifications below.

Connecting method: Connects a video signal cable from the signal selector to "VIDEO IN", and an RGB signal cable to "RGB1 IN".



At the signal selector D-sub 9p (male)			At the serial adapter (DCE) D-sub 9p (male)		Serial adapter	
Signal Name	Pin No.		Pin No.	Signal Name	Pin No. (cable side)	Pin No. (projector side)
NC	1		1	NC	---	---
RD Receive data	2		2	SD Transmit data	2	5
SD Transmit data	3		3	RD Receive data	3	3
NC	4		4	NC	---	---
GND Ground	5		5	GND Ground	5	4
NC	6		6	DSR	6	6
RS Transmit request	7		7	CS Transmit permission	7	1
CS Transmit permission	8		8	RS Transmit request	8	2
NC	9		9	NC	---	

Note:

Set VP control terminal switch of the signal selector to VP TYPE "B".

7 Disassembly Instructions

Warning:

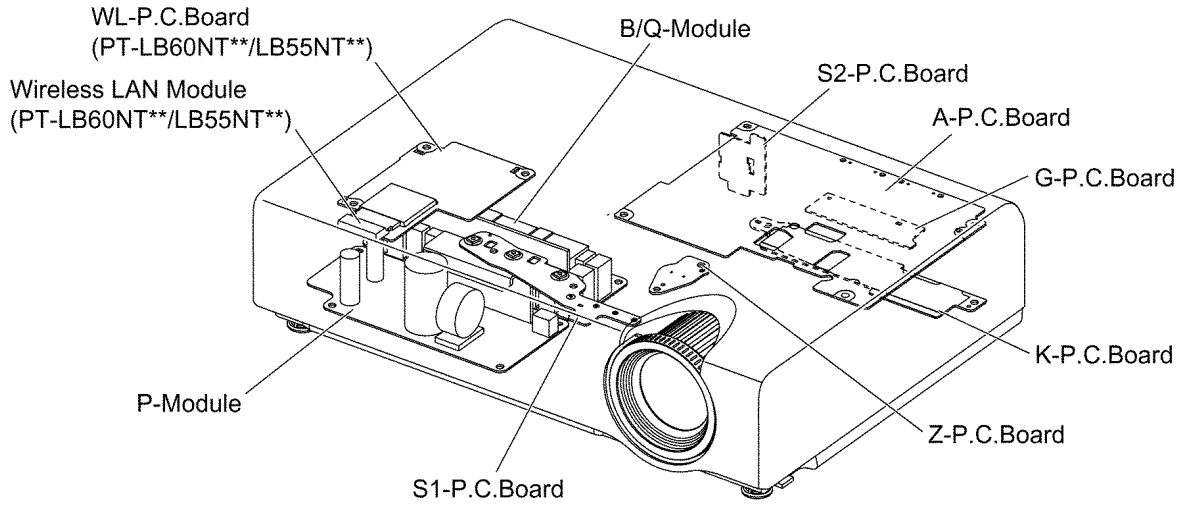
- Be sure to unplug the power cord from the power outlet before disassembling this projector.

Caution:

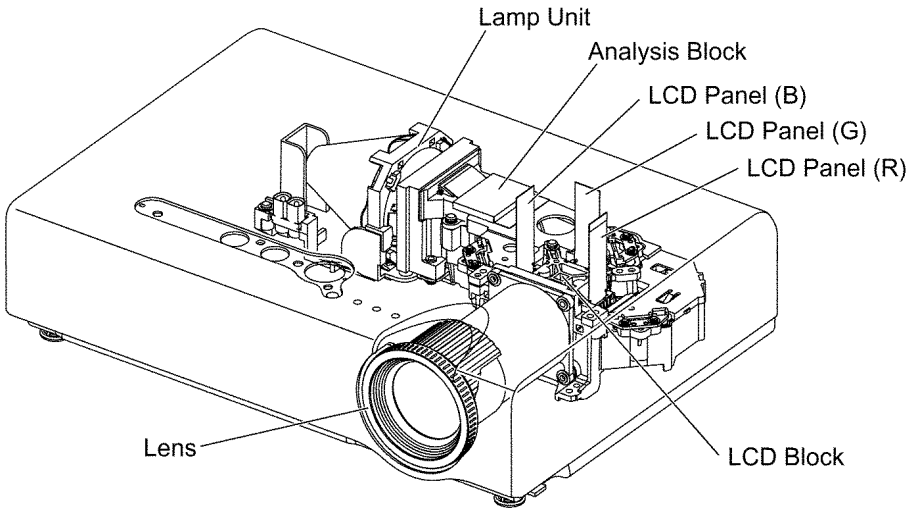
- While turning over a printed circuit board, be sure to put a insulating material under it to prevent a short circuit.
- Printed circuit boards and wires must not be pulled forcibly, but be handled carefully.
- Connectors also must be handled carefully.
- When reassembling, replace used adhesive tape with new one (Do not re-use used tape).
- After repairing this projector, be sure to put back the wires and connectors to the original condition.

7.1. Printed Circuit Board and Main Parts Location

Electrical Parts

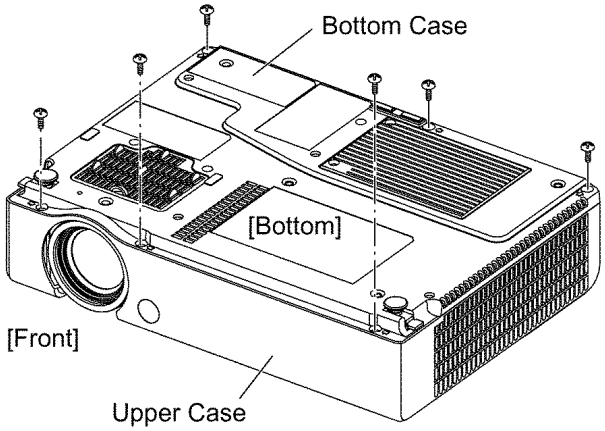


Optical Parts

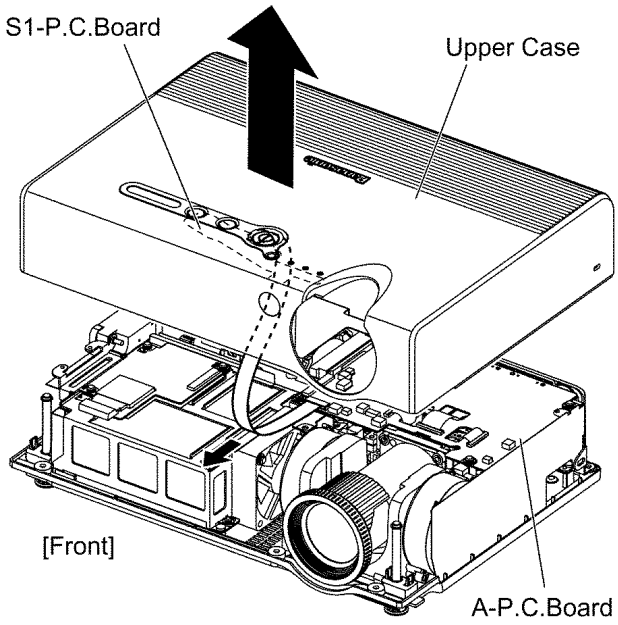


7.2. Removal of Upper Case

1. Turn the projector upside down.
2. Unscrew the 6 screws.

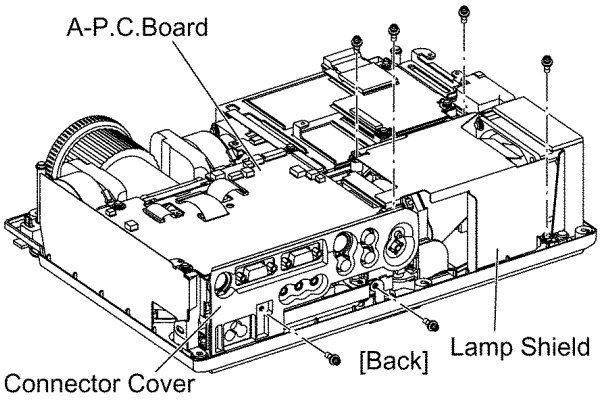


3. Return the projector to the normal position.
4. Lift the upper case upward (approx. 10 cm).
5. Disconnect the cable from S1-P.C.Board (connector A8 on A-P.C.Board) and remove the upper case.

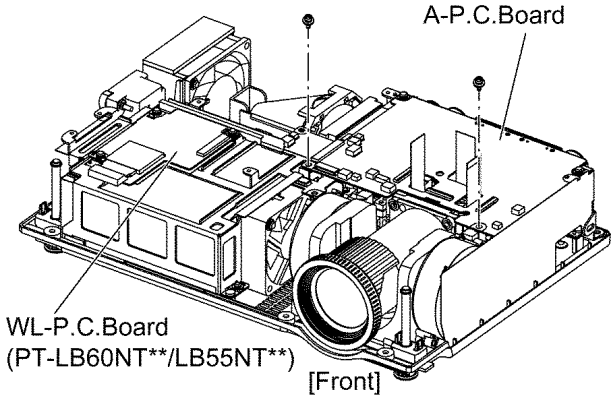


7.3. Removal of A-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 1 screw on the backside and remove the connector cover.
3. Unscrew the 1 screw fixing the connector metal fittings on the backside.
4. Unscrew the 4 screws and remove the lamp shield.



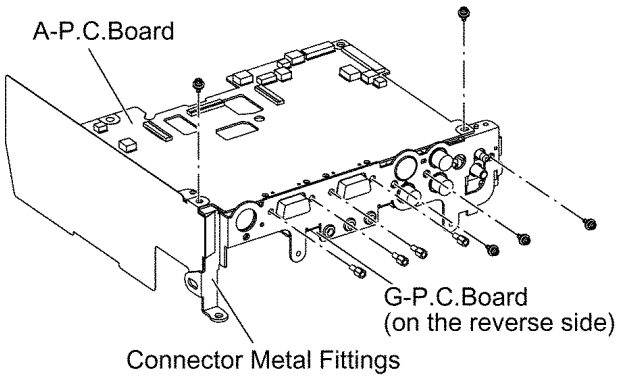
5. Disconnect the connectors from/to the A-P.C.Board block with the S2- and G-P.C.Boards.
6. Unscrew the 2 screws and remove the A-P.C.Board block.



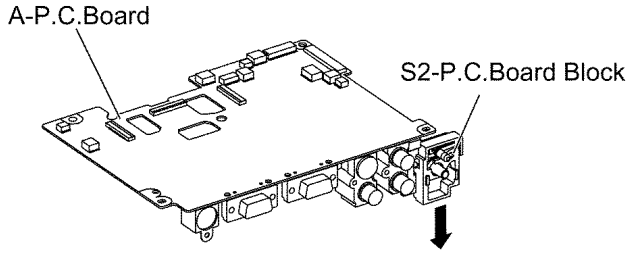
7. Disconnect the flexible cable from connector A20 on A-P.C.Board.
8. Unscrew the 9 screws and remove the connector metal fittings.

Notes:

- Because the S2-P.C.Board block is attached, work carefully when removing the connector metal fittings.
- G-P.C.Board is attached to the connector metal fittings. Be careful with handling.

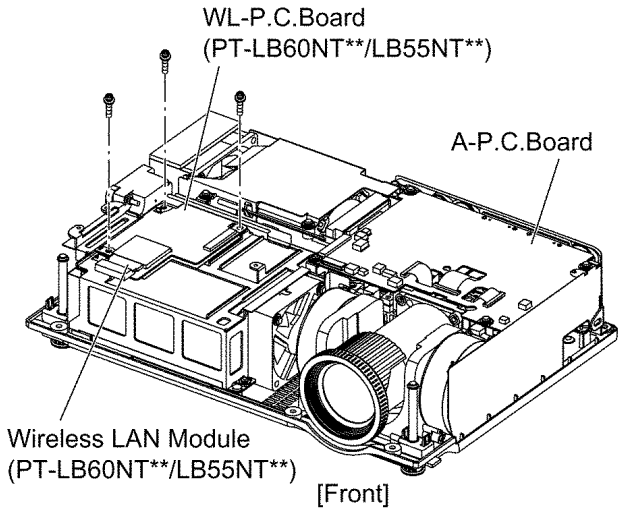


9. While disconnecting the connector between A- and S2-P.C.Boards, remove the S2-P.C.Board block.



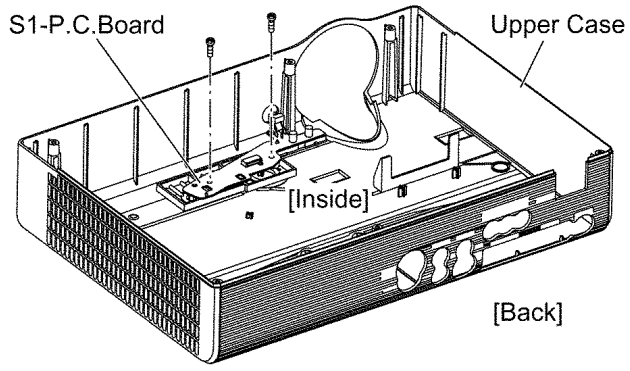
7.4. Removal of WL-P.C.Board (PT-LB60NTU/E/EA, PT-LB55NTE/EA only)

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 3 screws and remove the WL-P.C.Board with wireless LAN module.



7.5. Removal of S1-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the S1-P.C.Board.

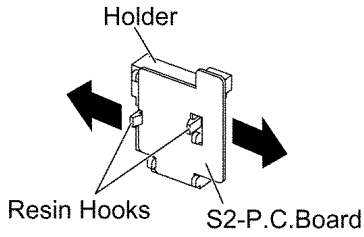


7.6. Removal of S2-P.C.Board

1. Remove the S2-P.C.Board block according to the section 7.3. "Removal of A-P.C.Board".
2. Remove the holder while expanding the resin hooks outside.

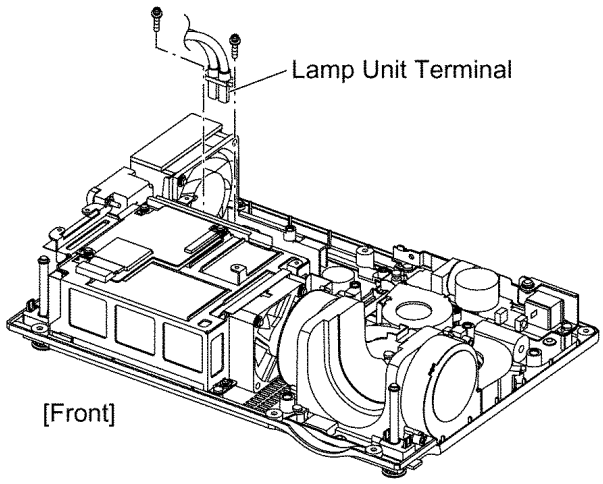
Note:

・Work carefully not to damage the resin hook.

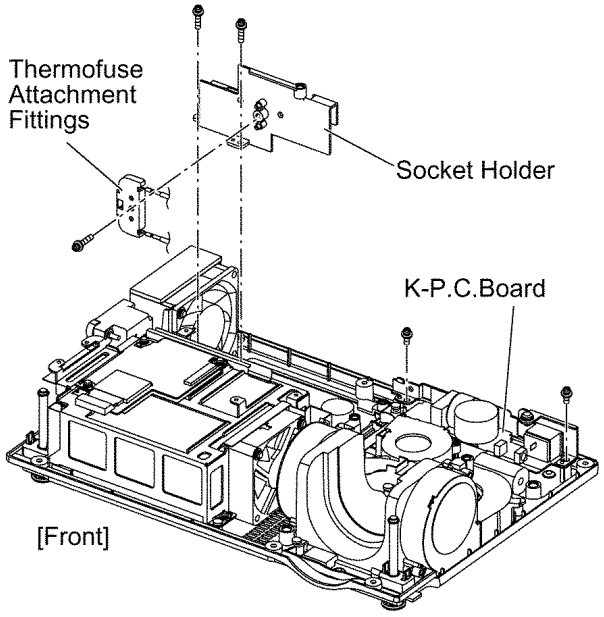


7.7. Removal of K-P.C.Board

1. Remove the analysis block, LCD block and lens according to the steps 1 through 3 in the section 7.13. "Removal of Analysis Block and Lens".
2. Unscrew the 2 screws and remove the lamp unit terminal.

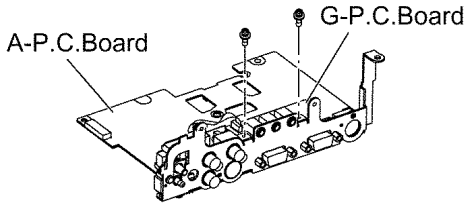


3. Unscrew the 2 screws and remove the socket holder.
4. Unscrew the 1 screw and separate the socket holder and thermofuse attachment fittings.
5. Unscrew the 2 screws and remove the K-P.C.Board.



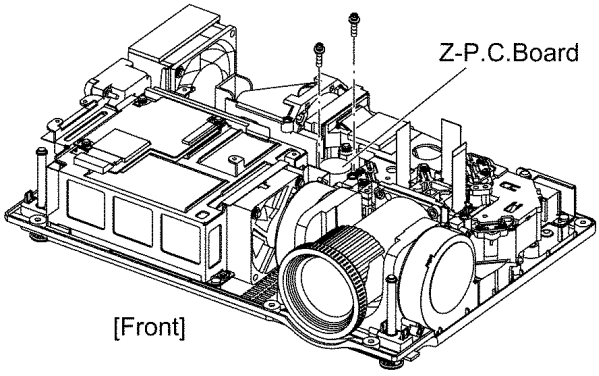
7.8. Removal of G-P.C.Board

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Disconnect the flexible cable between the G-P.C.Board and A-P.C.Board.
3. Unscrew the 2 screws and remove the G-P.C.Board.



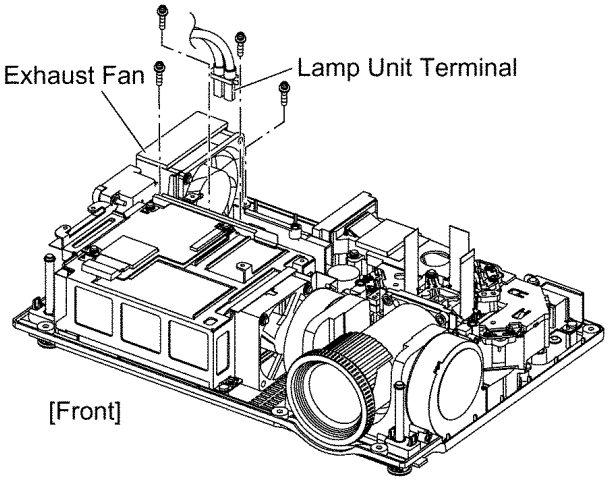
7.9. Removal of Z-P.C.Board

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the Z-P.C.Board.

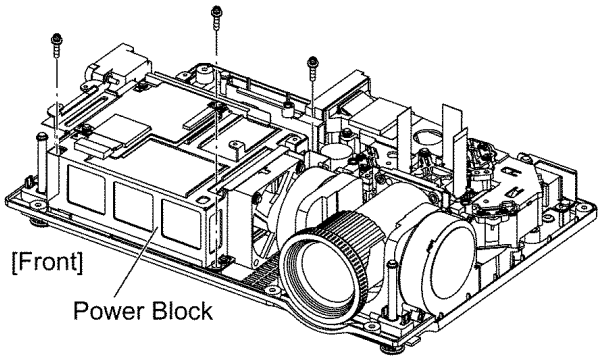


7.10. Removal of B/Q-Module

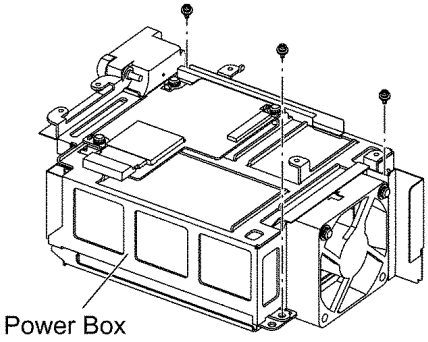
1. Remove the lamp unit according to the section 7.12. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
3. Unscrew the 2 screws and remove the lamp unit terminal.
4. Unscrew the 2 screws and remove the exhaust fan .



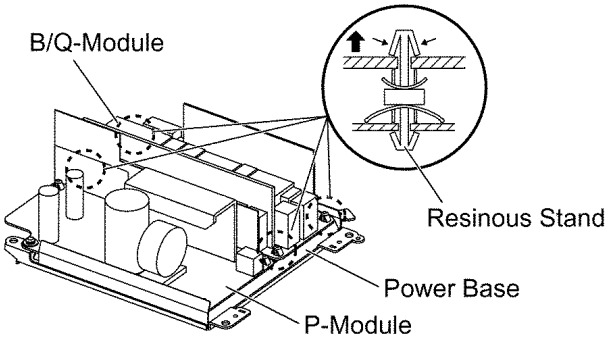
5. Unscrew the 3 screws and remove the power block (P-Module and B/Q-Module).



6. Unscrew the 3 screws and remove the power box.

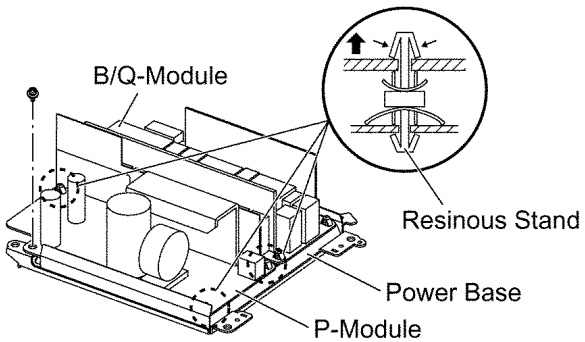


7. While pressing to shut each hook of the 4 resinous stands, remove the B/Q-Module.



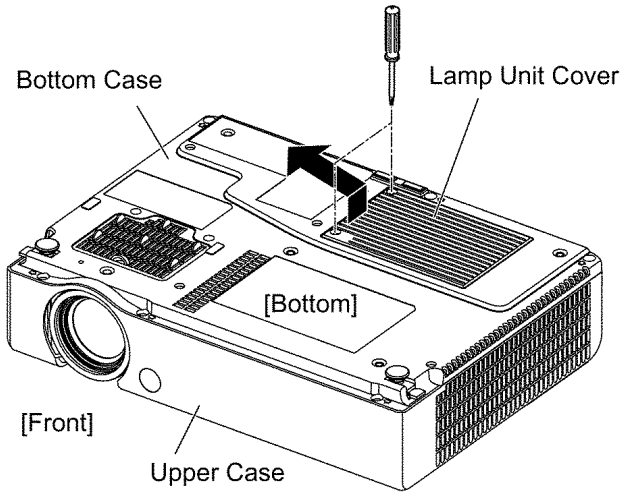
7.11. Removal of P-Module

1. Remove the power block and power box according to the steps 1 through 6 in the section 7.10. "Removal of B/Q Module".
2. Unscrew the 1 screw.
3. While pressing to shut each hook of the 3 resinous stands, remove the P-Module.

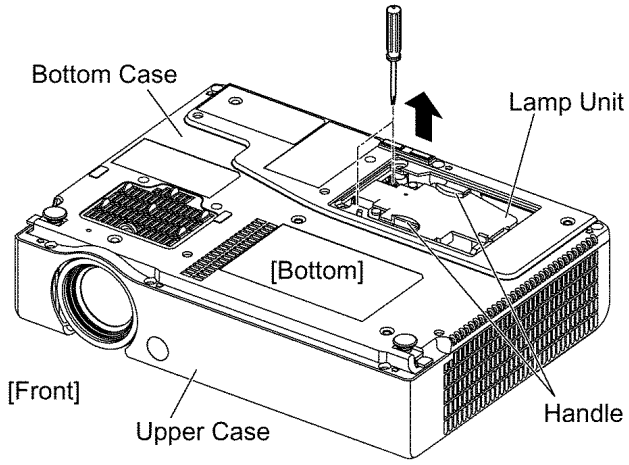


7.12. Removal of Lamp Unit

1. Turn the projector upside down.
2. Loosen the 2 screws until they idle, remove the lamp unit cover.



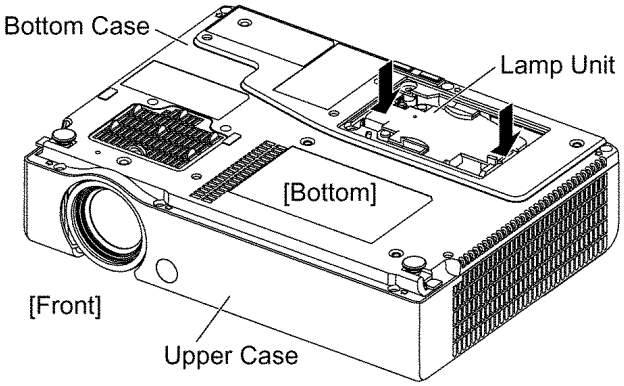
3. Loosen the 2 screws until they idle, remove the lamp unit with the handle.



Note:

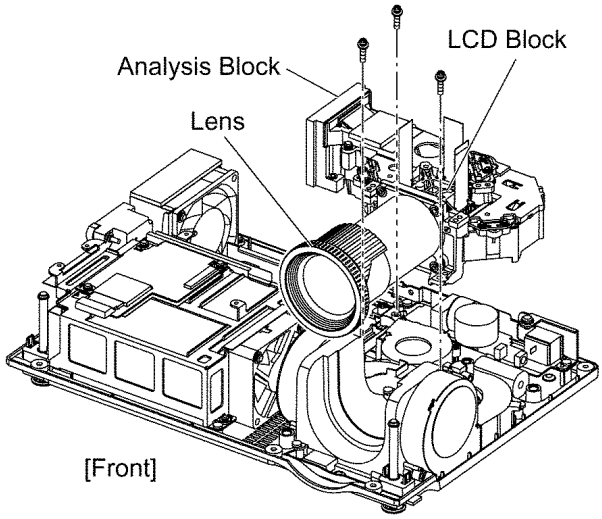
- When installing the lamp unit (or a new one) in the main unit, place it in a specified position and press the connector side and the opposite side of the lamp unit (arrow positions shown in the figure below), and confirm the lamp unit is inserted securely.

  Then, tighten the 2 screws fixing the lamp unit, and attach the lamp unit cover.

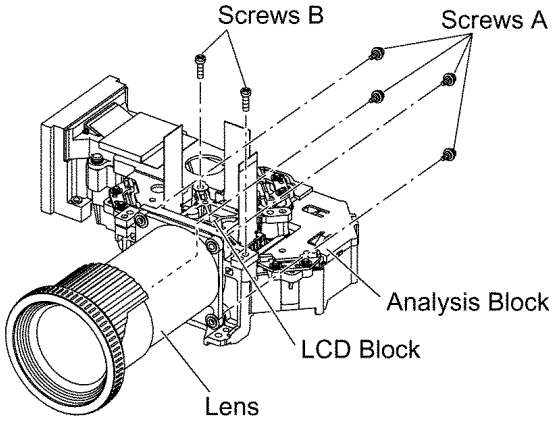


7.13. Removal of Analysis Block and Lens

1. Remove the lamp unit according to the section 7.12. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
3. Unscrew the 3 screws and remove the analysis block, LCD block and lens.



4. Unscrew the 4 screws A and remove the lens.
5. Unscrew the 2 screws B and remove the LCD block (the analysis block remains).

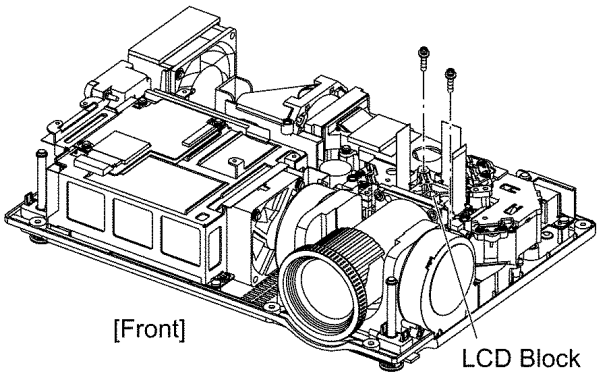


7.14. Removal of LCD Block

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the LCD block.

Note:

- Be careful not to touch the surface of prism and LCD panel.



7.15. Replacement of LCD Panel (B)

1. Remove the LCD block according to the section 7.14. "Removal of LCD Block".

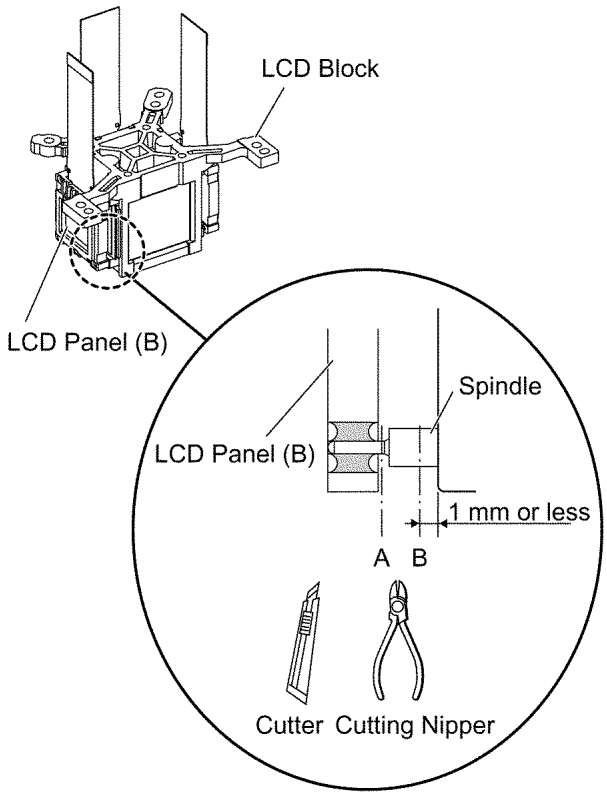
   Note:

   - Be careful not to touch the surface of prism and LCD panel.

2. Cut the 4 LCD panel installation spindles at the position A and remove the LCD panel.
3. Cut the 4 LCD panel installation spindles at the position B and remove them.

   Notes:

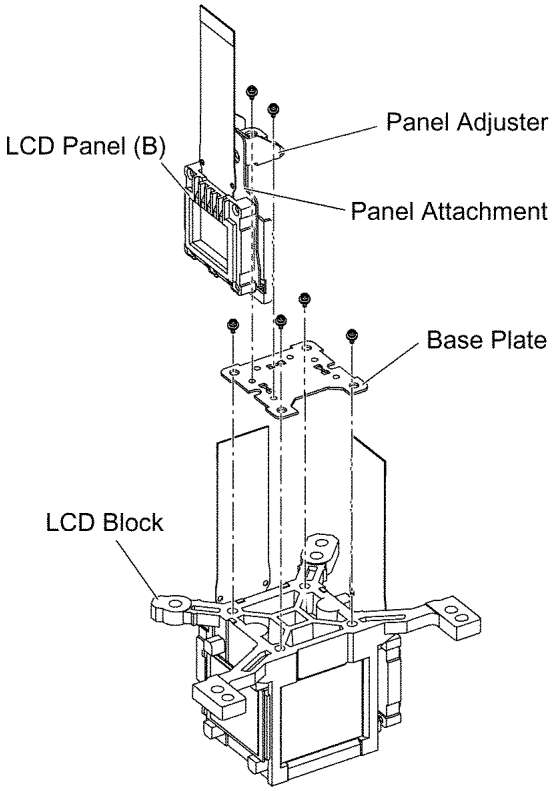
   - Work carefully not to apply external force around the spindle part by using a cutter, cutting nipper or the like for cutting the spindle.
   - Adjust the height after the spindle is cut to 1 mm or less.



4. Attach the base plate with 4 screws.
5. Tighten the 2 screws temporarily just until new LCD panel (with the panel attachment and panel adjuster) can be shifted by your fingers.

   Note:

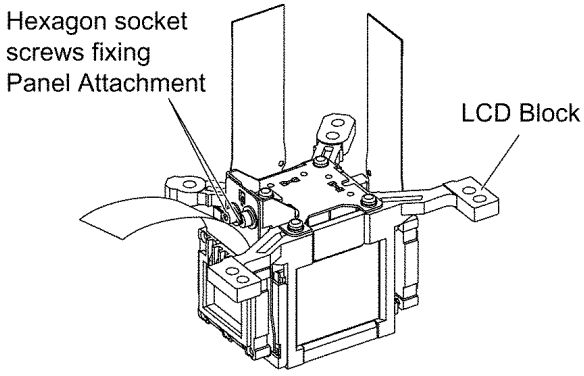
   - The panel adjuster complete set (adjuster, attachment and base plate) is the option for service.



6. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
7. Adjust the convergence according to the section 8.4. "Convergence Adjustment".
8. After the adjustment, while paying attention not to vary the adjusting result, tighten the 2 screws fixing the panel attachment with a hexagon head wrench.

   Notes:

   - Prepare a hexagon head wrench processed short.

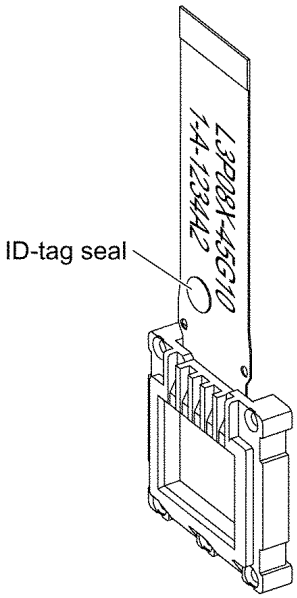


9. Reassemble the projector as it was.

7.16. LCD Panel Discrimination

ID-tag seal color	LCD panel
Red	LCD panel (R)
Blue	LCD panel (B)
(No seal)	LCD panel (G)

- Since the ID-tag seal is pasted to the FPC of LCD Panel, (R), (G) or (B) can be easily identified by the color of the seal.
- Finally, identify the panel color by the part number printed on the FPC.



7.17. LCD Panel Combination

- Part number is printed on the FPC of LCD Panel.
- When replacing LCD Panel, use a component which has the same part number as the original.

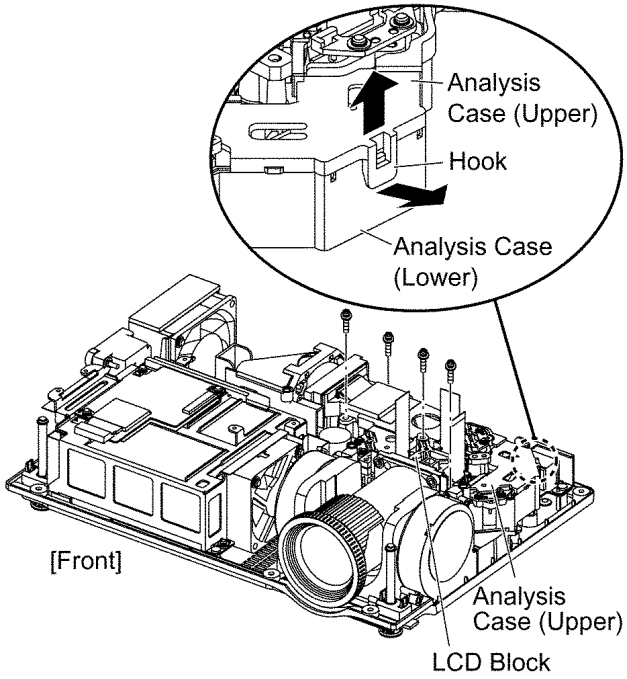
Model number	LCD panel	Part No.
PT-LB60NTU/E/EA PT-LB60U/EA	R	L5BDAXQ00224 (L3P08X-45G10)
	G	L5BDAXQ00225 (L3P08X-45G10)
	B	L5BDAXQ00226 (L3P08X-45G10)
PT-LB55NTE/EA PT-LB55EA	R	L5BDAYY00014 (L3P07X-55G11)
	G	L5BDAYY00015 (L3P07X-55G11)
	B	L5BDAYY00016 (L3P07X-55G11)

7.18. Replacement of Incidence Polarizer (R and B)

1. Remove the LCD block according to the section 7.14. "Removal of LCD Block".
2. Unscrew the 2 screws.
3. Remove the analysis case (upper) while expanding the hook of it outside.

   Note:

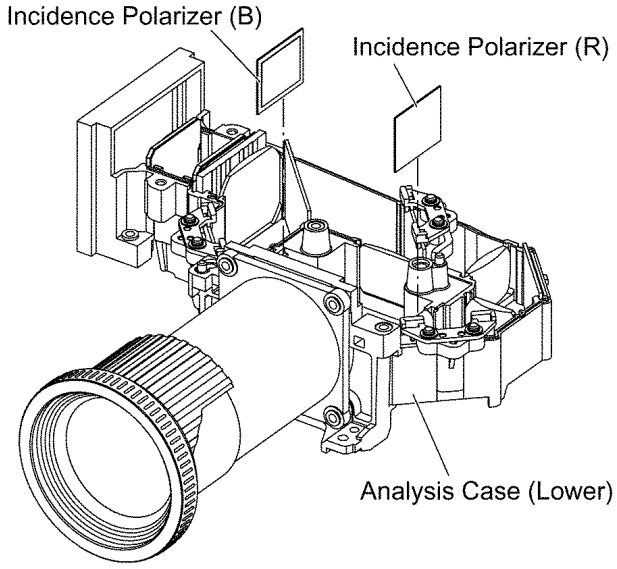
   - Because the hook is damaged easily, be careful not to expand it excessively.
   - The incidence polarizer (G) is installed in the analysis case (upper). Handle with care not to apply external force to the incidence polarizer (G).



4. Replace the incidence polarizer.

   Note:

   - Be careful not to touch the surface of incidence polarizer.



7.19. Replacement of Incidence Polarizer (G)

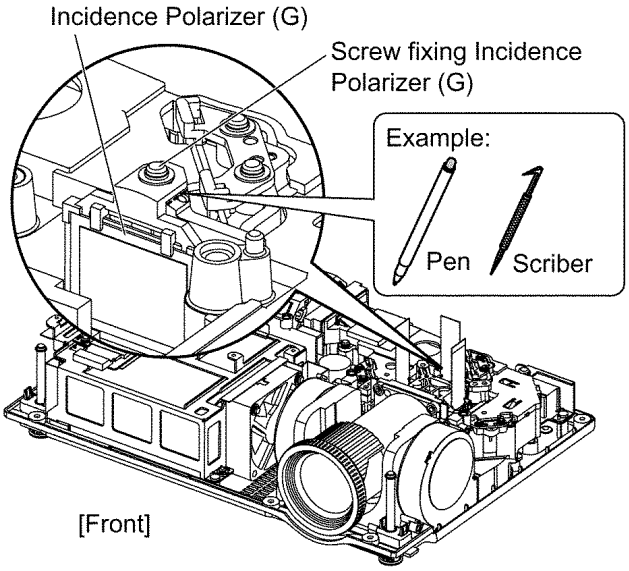
1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Mark positions of the incidence polarizer (G).

   Note:

   - Mark accurately as possible because the marks will be used for resetting the incidence polarizer position.
3. Unscrew the 1 screw and remove the incidence polarizer

(G).

4. Attach a new incidence polarizer (G) and align it with the mark.
5. Tighten the 1 screw with care not to move the incidence polarizer position.



7.20. Replacement of Projection Polarizer

・The procedure is described as an example of projection polarizer (B).

1. Remove the LCD block according to the section 7.14. "Removal of LCD Block".
2. Remove the projection polarizer which requires replacing. (The projection polarizer is secured with adhesive tape.)

   Notes:

   ・Be careful not to damage peripheral components (prism, LCD panel, etc.).

   ・Use tweezers.
3. Install new projection polarizer.

   a. Put adhesive tape on the projection polarizer.

   b. Stick the projection polarizer on the specified position.

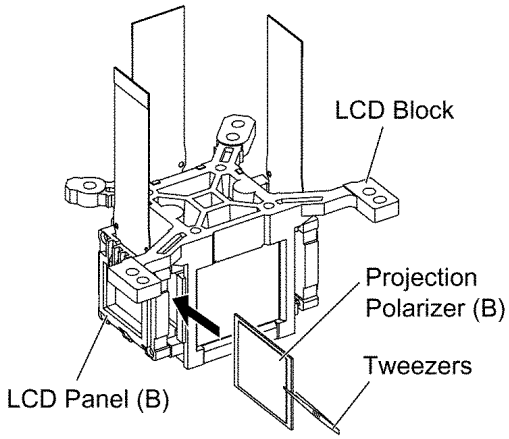
   Notes:

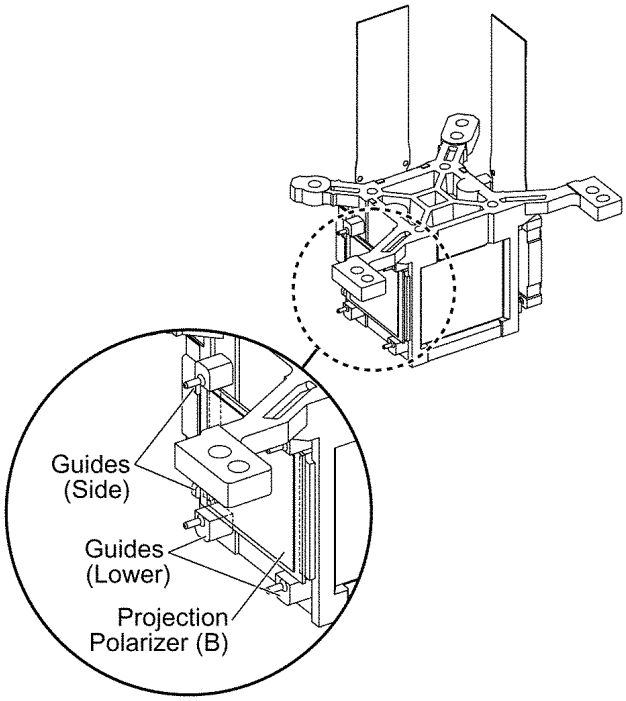
   ・Align the projection polarizer with the guides (lower, side) of LCD block.

   ・Be careful not to touch the surface of projection polarizer.

   ・Use tweezers.

   c. Press the adhesive part and secure the projection polarizer.





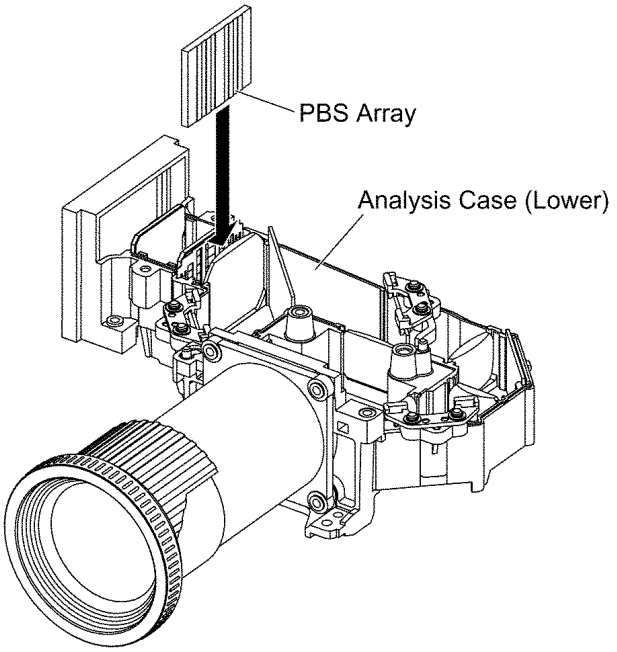
7.21. Replacement of PBS Array (Analysis Block)

1. Remove the analysis case (upper) according to the steps 1 through 3 in the section 7.18. "Replacement of Incidence Polarizer (R and B)".
2. Remove the PBS array.
3. Install new PBS array.

   Note:

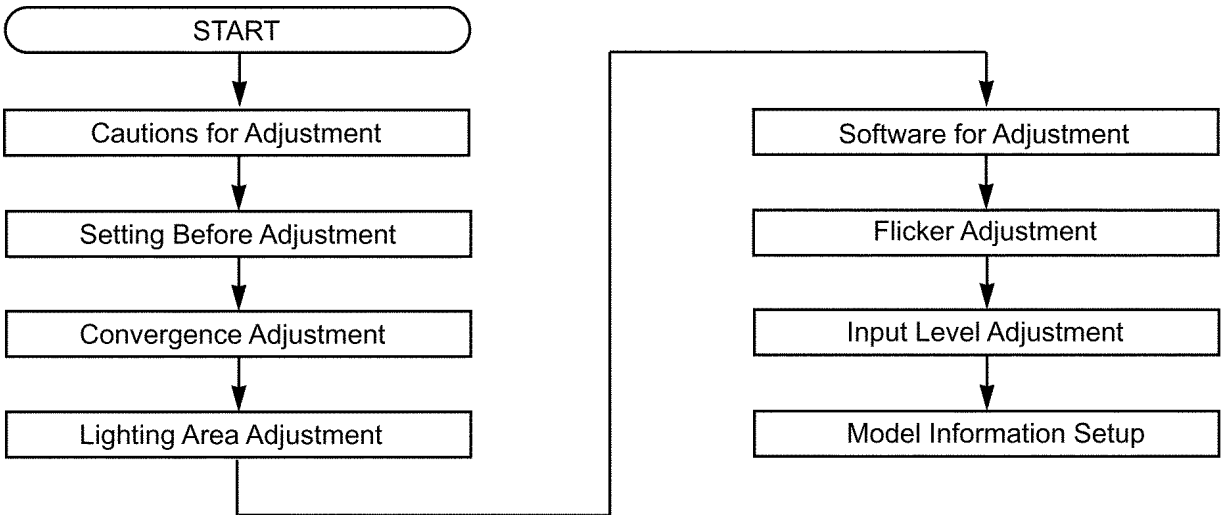
   ・Be careful not to mistake the direction (inside and outside, upper and lower).

   ・Be careful not to touch the surface of PBS array.


PBS Array
Analysis Case (Lower)

8 Measurement and Adjustments

8.1. Adjustment Procedure Flowchart

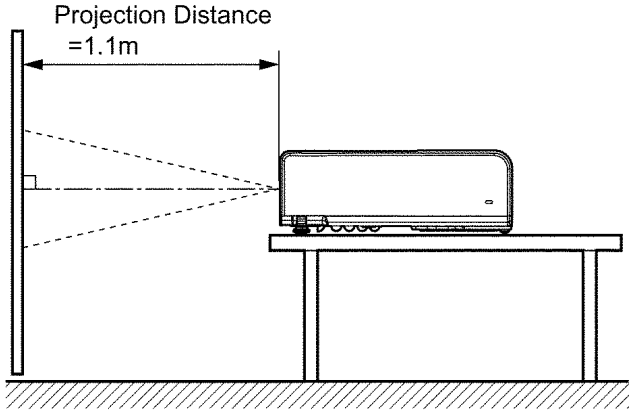


8.2. Cautions for Adjustment

- Never unplug the power cord until the power indicator on the projector illuminates red.
- To maintain and ensure safety, always use the designated components for replacement parts.
- If removing any clamps, lead wires or connectors, always place them back in their proper locations.
- Be careful not to damage the lead wires or components when using a soldering iron or similar tool.

8.3. Setting Before Adjustment

- Set up the projector to obtain the projection distance below.
- Turn the zoom ring of the projector to obtain the largest size of the picture.



8.4. Convergence Adjustment

Execute this adjustment when replacing the LCD panel (B) .

8.4.1. Tools to be used

Service Kit : This kit is composed of 3 extension flexible cables and 1 connector extension cable.

Note:

- Consult your dealer or Authorized Service Center for the service kit.

8.4.2. Preparation

1. Loosen 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment, then tighten the 4 screws temporarily just until the LCD panel can be shifted by your fingers.

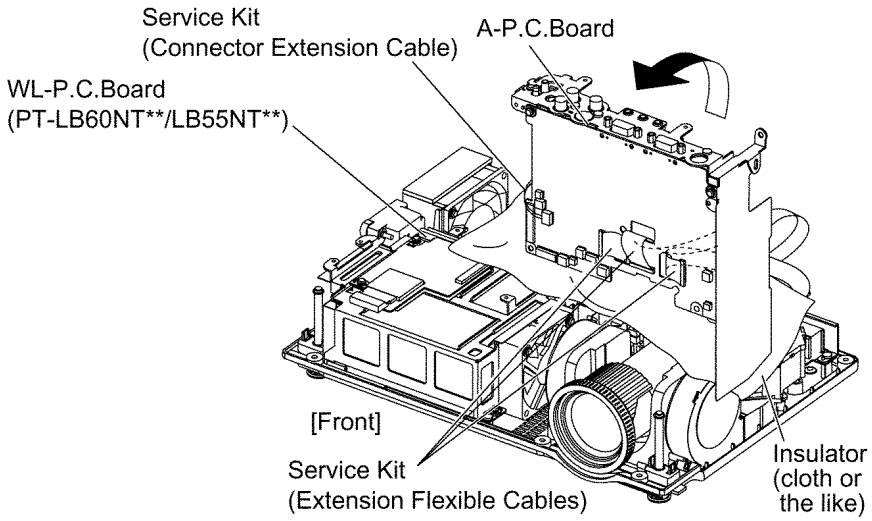
Note:

・See figures in the section 7.15. "Replacement of LCD Panel (B)" for 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment.

2. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
3. Connect the service kit (extension cables).
   ・Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
   ・PBS fan connector - Connector (A19) on A-P.C.Board
4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

Note:

・Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.

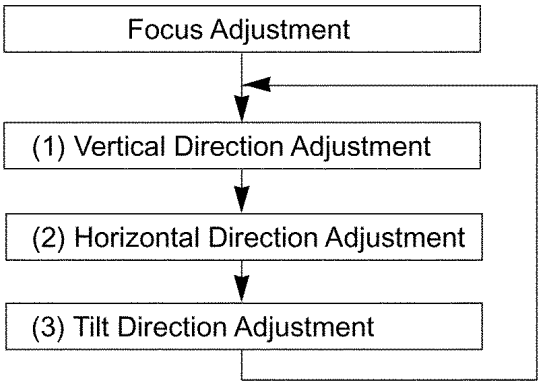


8.4.3. Adjustment Procedure

Prepare 2 pieces of thick black paper (23 mm × 100 mm) that can be shaded.

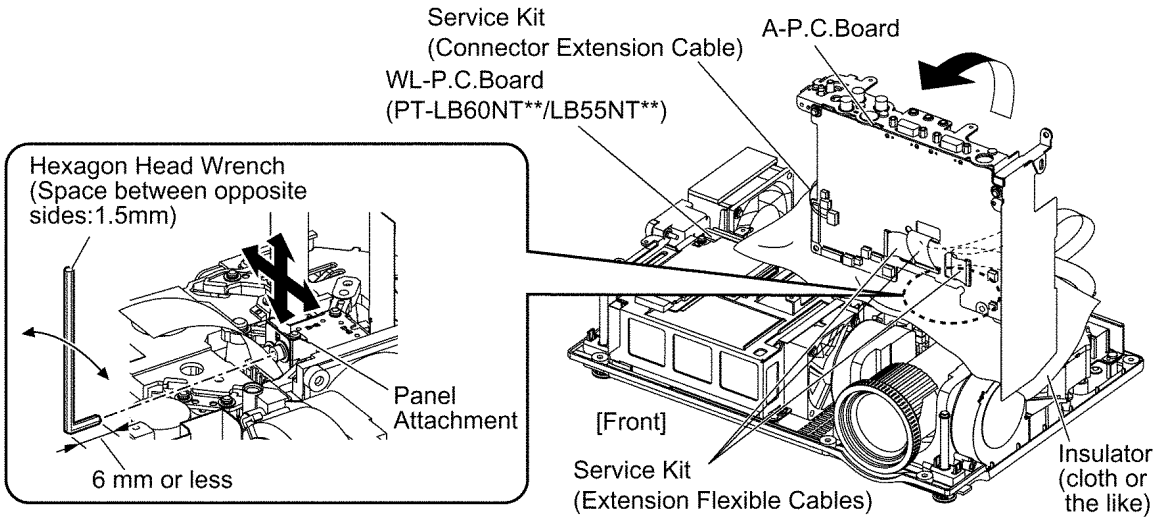
・Cover and shade LCD panels (R) and (G) with the paper.

1. Display the green crosshatch pattern and adjust the lens focus.
2. Display green and blue crosshatch patterns.
3. Adjust focus by shifting the panel adjuster for LCD panel (B) back and forth, then tighten the 2 screws.
4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.
5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
7. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the blue crosshatch pattern is overlapped with green one.



Repeat steps (1) to (3) until the green and blue crosshatch patterns merge into a cyan pattern.

8. After the adjustment, reassemble the projector according to the steps 8 through 9 in the section 7.15. "Replacement of LCD Panel (B)".



8.5. Lighting Area Adjustment

8.5.1. Tools to be used

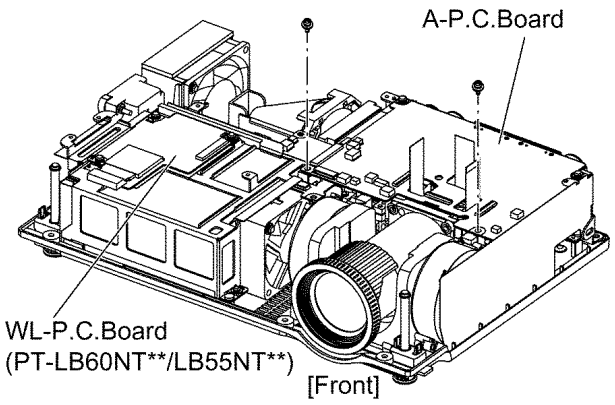
Service Kit: This kit is composed of 3 extension flexible cables and 1 connector extension cable.

Note:

・Consult your dealer or Authorized Service Center for the service kit.

8.5.2. Preparation

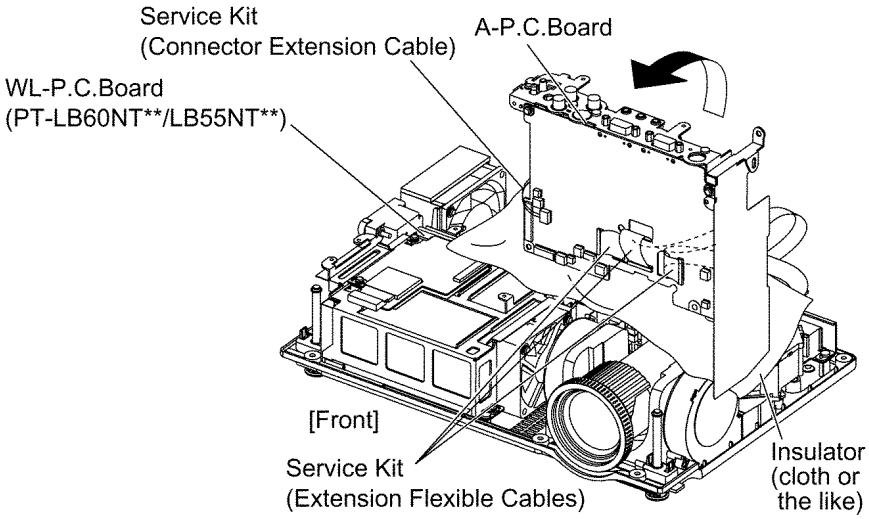
1. Remove the connector cover and lamp shield according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws.



3. Connect the service kit (extension cables).
   - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
   - PBS fan connector - Connector (A19) on A-P.C.Board
4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

Note:

- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



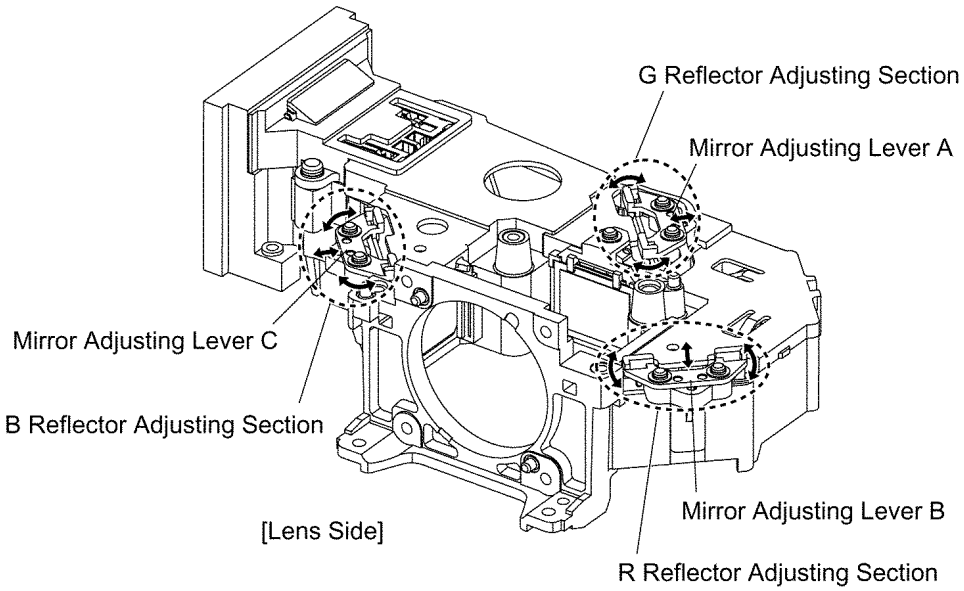
8.5.3. Adjustment Procedure

8.5.3.1. Outline

When the lighting area is off from the adjustment and color unevenness appears, adjust the lighting area into correct position.

Symptom	Measure
Magenta unevenness	G Reflector Adjustment
Cyan unevenness	R Reflector Adjustment
Yellow unevenness	B Reflector Adjustment

- Shifting the mirror adjusting lever horizontally, adjust color unevenness on the screen upper/lower sides.
- Twisting the mirror adjusting lever, adjust color unevenness on the screen right/left sides.



[Above figure is shown only the analysis block for explanation.]

8.5.3.2. G Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever A just until the lever can be shifted.
3. Adjust the mirror adjusting lever A position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

8.5.3.3. R Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever B just until the lever can be shifted.
3. Adjust the mirror adjusting lever B position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

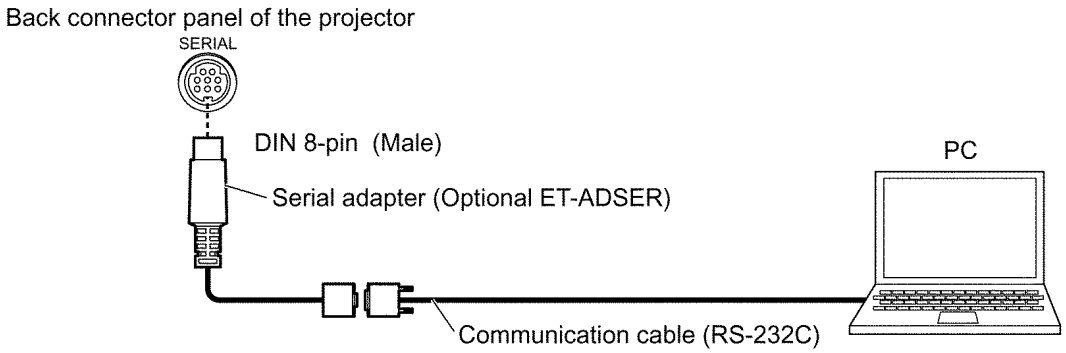
8.5.3.4. B Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever C just until the lever can be shifted.
3. Adjust the mirror adjusting lever C position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

8.6. Software for Adjustment

8.6.1. Outline

- This projector needs computer-aided adjustments.
- After the software adjustments, this projector must be turned off and on again to memorize the settings.
- Connect the cable between the projector and a PC as shown below.
- Updating the software will change the version number.



8.6.2. Operating Procedure

1. Run software program by the keyboard entry.

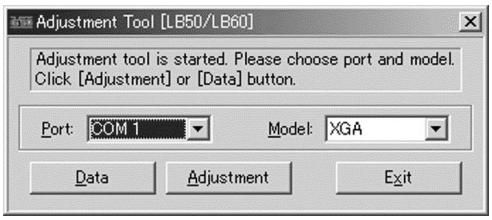
   Note:

   ・Use the software program as below.

   Adjustment Tool [LB50/LB60]

2. The first menu is Port and Model selection menu.
3. Adjust the projector by selecting the necessary item from the menu in each stage.

8.6.3. Port and Model Selection Menu



Select the applying item with the list box and click "Data" or "Adjustment".

8.6.3.1. Explanation of Buttons

Port:

Port name of PC which connects with the projector

Model:

Pixels (XGA/S-VGA) of LCD panels of the model involved

Data:

Displays the data transmission/reception menu.

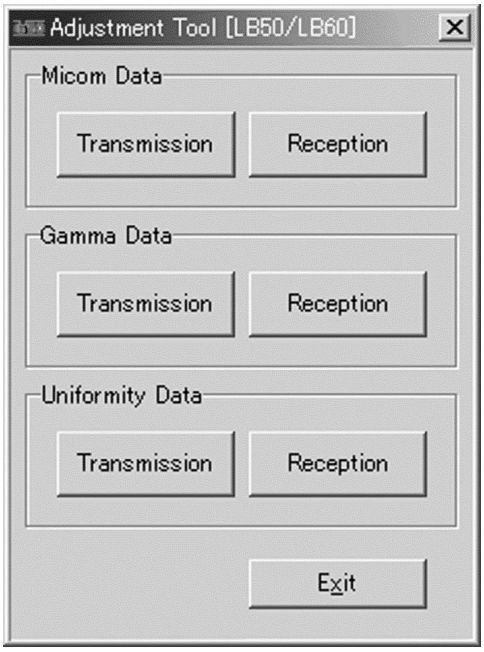
Adjustment:

Displays the adjustment menu.

Exit:

Exits this application.

8.6.4. Data Transmission/Reception Menu



8.6.4.1. Explanation of Buttons

Micom Data Transmission:

Reads the microcomputer data from the file and transmits it to the projector.

Micom Data Reception:

Receives the microcomputer data from the projector and writes it in the file.

Gamma Data Transmission:

Reads the gamma data from the file and transmits it to the projector.

Gamma Data Reception:

Receives the gamma data from the projector and writes it in the file.

Uniformity Data Transmission:

Reads the color unevenness correction data from the file and transmits it to the projector.

Uniformity Data Reception:

Receives the color unevenness correction data from the projector and writes it in the file.

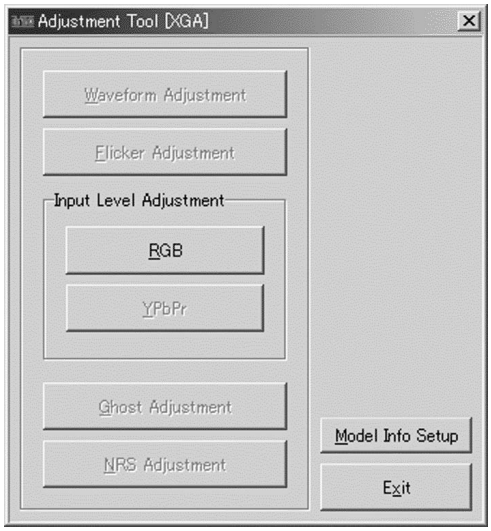
Exit:

Exits this application.

8.6.4.2. Receiving and transmitting of the data

Click a target button and specify a file name.

8.6.5. Adjustment Menu



8.6.5.1. Explanation of Buttons

Input Level Adjustment RGB:

Displays the RGB input level adjustment menu.

Model Info Setup

Displays the model information setup menu.

Exit:

Exits this application.

8.7. Flicker Adjustment

According to the procedure of chapter 5 "Flicker Adjustment Mode", minimize the flicker.

8.8. Input Level Adjustment

8.8.1. Adjustment Menu

8.8.2. Explanation of Buttons

OK:

Executes automatic sub contrast and sub brightness adjustments, then closes this dialog.

Cancel:

Cancels this menu.

8.8.3. Equipment to be used

PC, RGB Signal Generator, Software for Adjustment

8.8.4. Adjustment Procedure

1. Display the input level adjustment [RGB] menu.
2. Input a window pattern signal to PC IN 1 connector.

Note:

・Use approx. 15 % window pattern as follows.

Black background (screen width) : White window width = 2 : 1

Black background (screen height) : White window height = 3 : 1

・Use the window pattern of XGA (1 024 × 768).

3. Click the OK button.

8.9. Model Information Setup

8.9.1. Adjustment Menu

8.9.2. Explanation of Buttons

Radio buttons:

Selects the corresponding model name.

OK:

Executes model information setup, then closes this dialog.

Cancel:

Cancels this menu.

8.9.3. Equipment to be used

PC, Software for Adjustment

8.9.4. Setup Procedure

Set the projector into standby mode (POWER button on the projector control panel illuminated red), and execute the following procedure.

1. Display the model information setup menu.
2. Select the corresponding model name.
3. Click the OK button.

9 Troubleshooting

The letters in the left of the inspection items indicate the P.C.Boards or Modules related to their respective descriptions.

Note: A

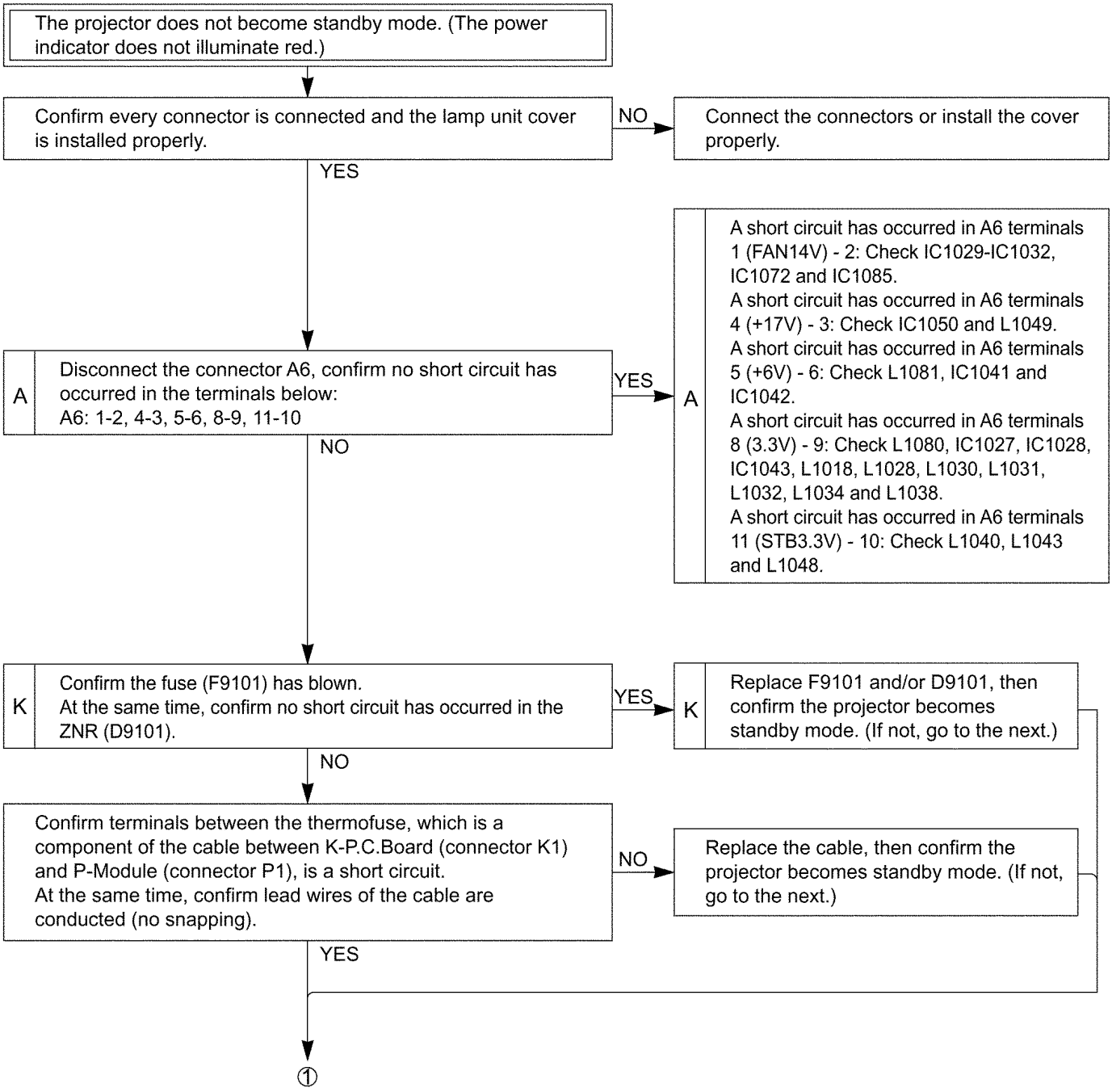
The letter of the alphabet indicates the P.C.Board or Module name.
(Example) A: A-P.C.Board, B: B-Module

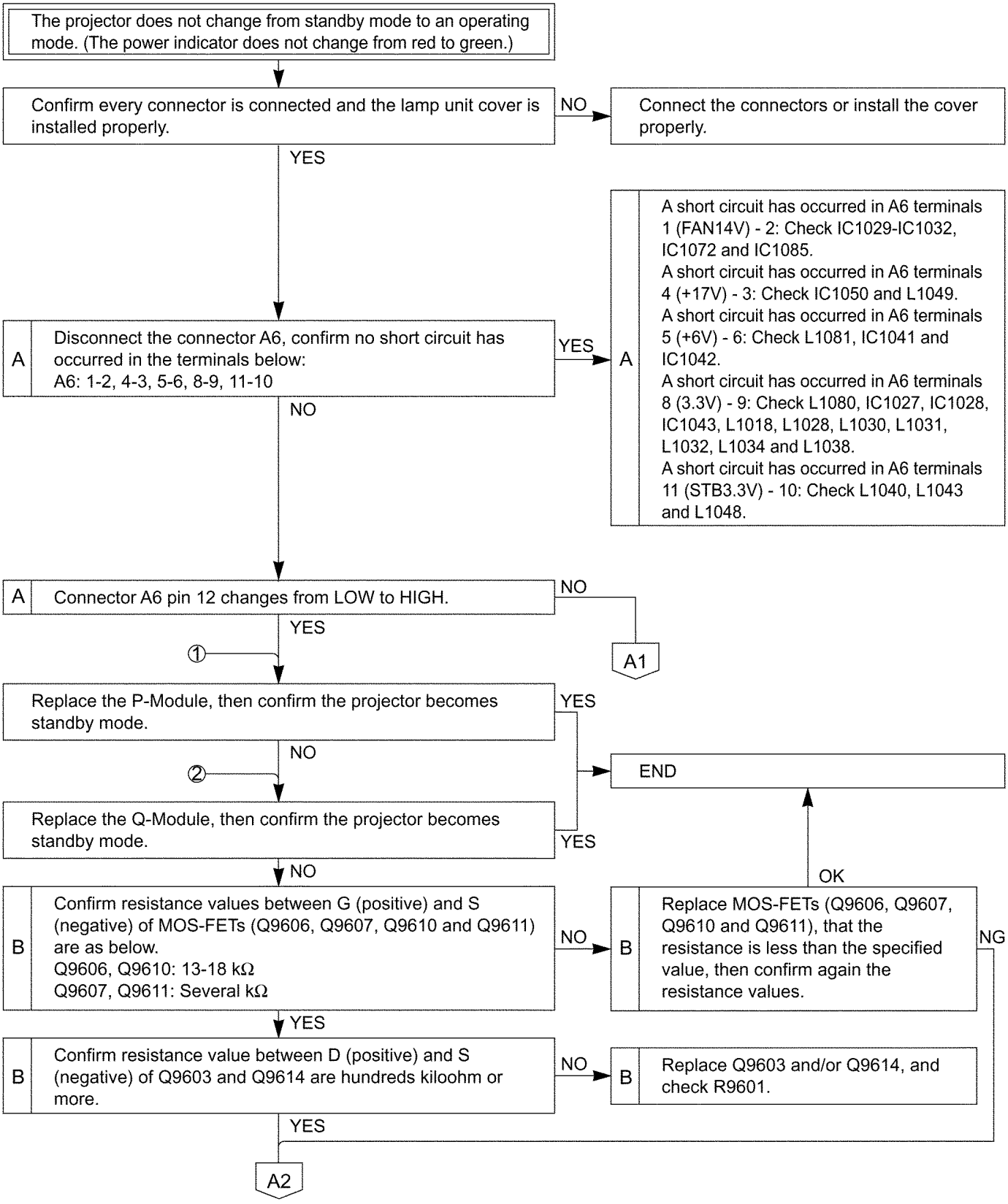
If replacing A-P.C.Board (assembly), read the ROM data from the old P.C.Board and write it in the new one according to the section 8.6. "Software for Adjustment". At this time, if the readout from the old P.C.Board does not succeed, remove IC1011 and IC1017 from the old P.C.Board and install them on the new one. Then, execute the self-check according to the chapter 3. "Self-Check Mode", and confirm "G SAVED" and "U-SAVED" display "OK".

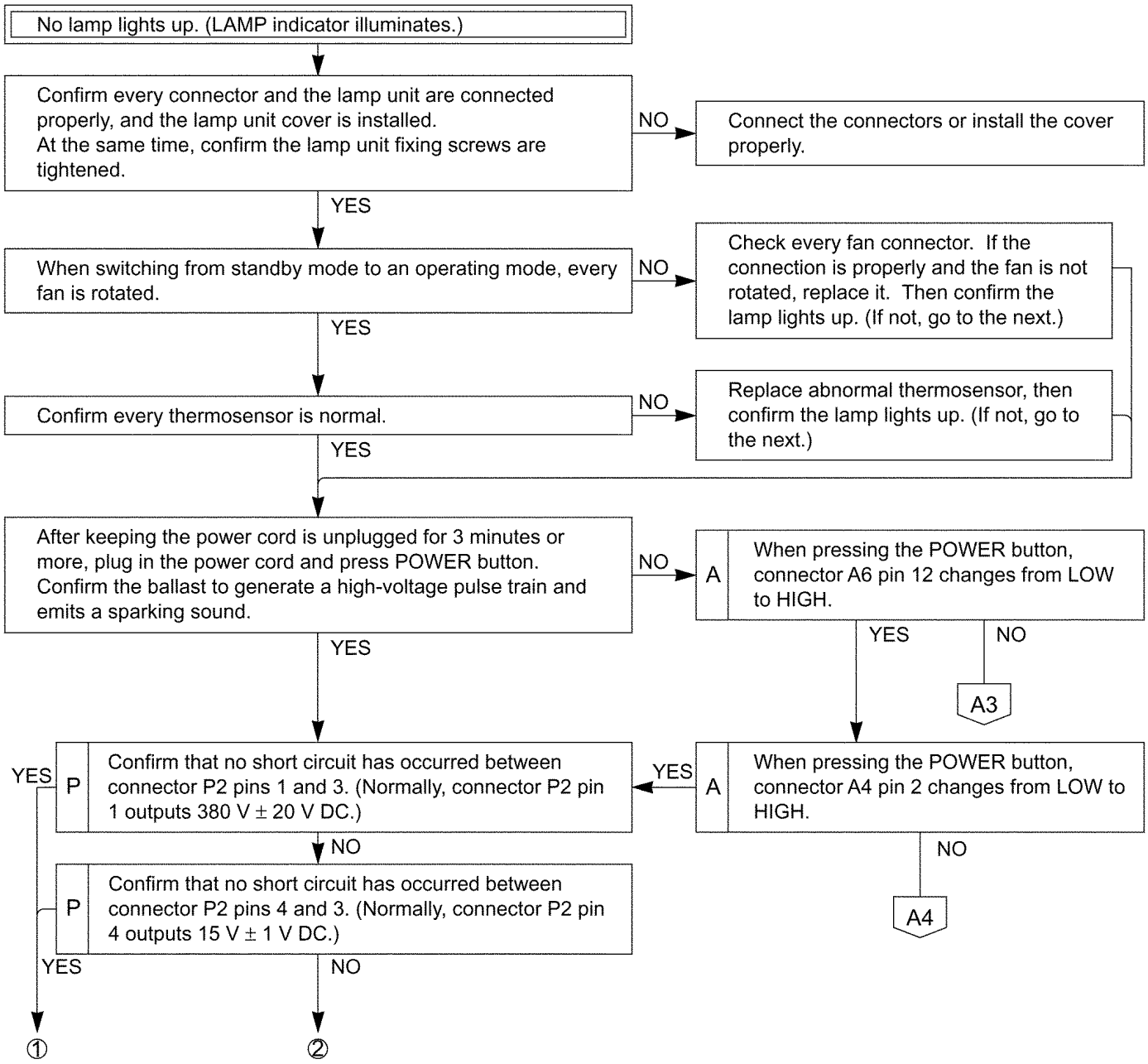
If replacing A-P.C.Board (assembly), minimize the flicker according to the chapter 5. "Flicker Adjustment Mode".

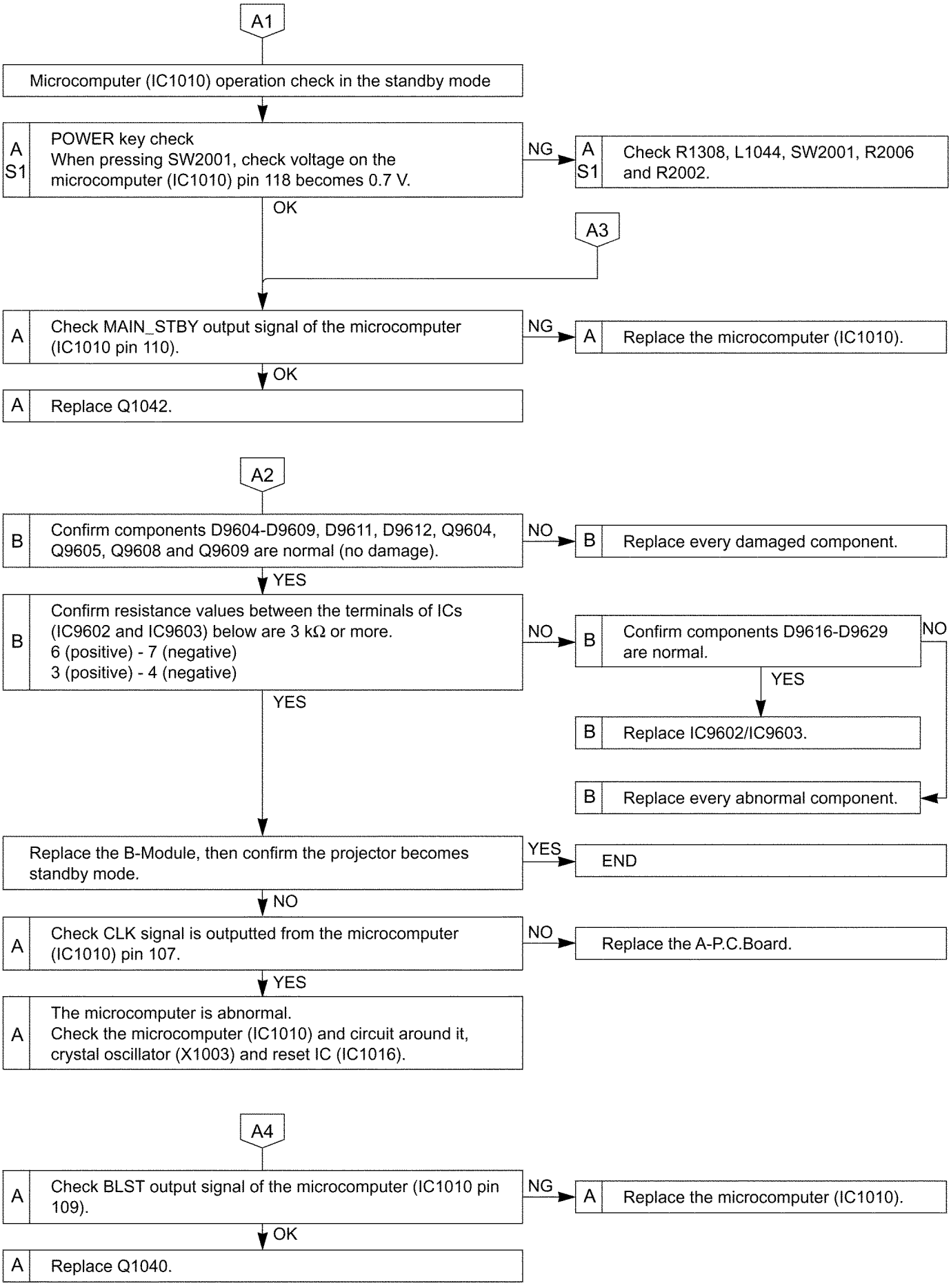
If replacing A-P.C.Board (assembly), adjust the RGB Input Level according to the chapter 8.8. "Input Level Adjustment".

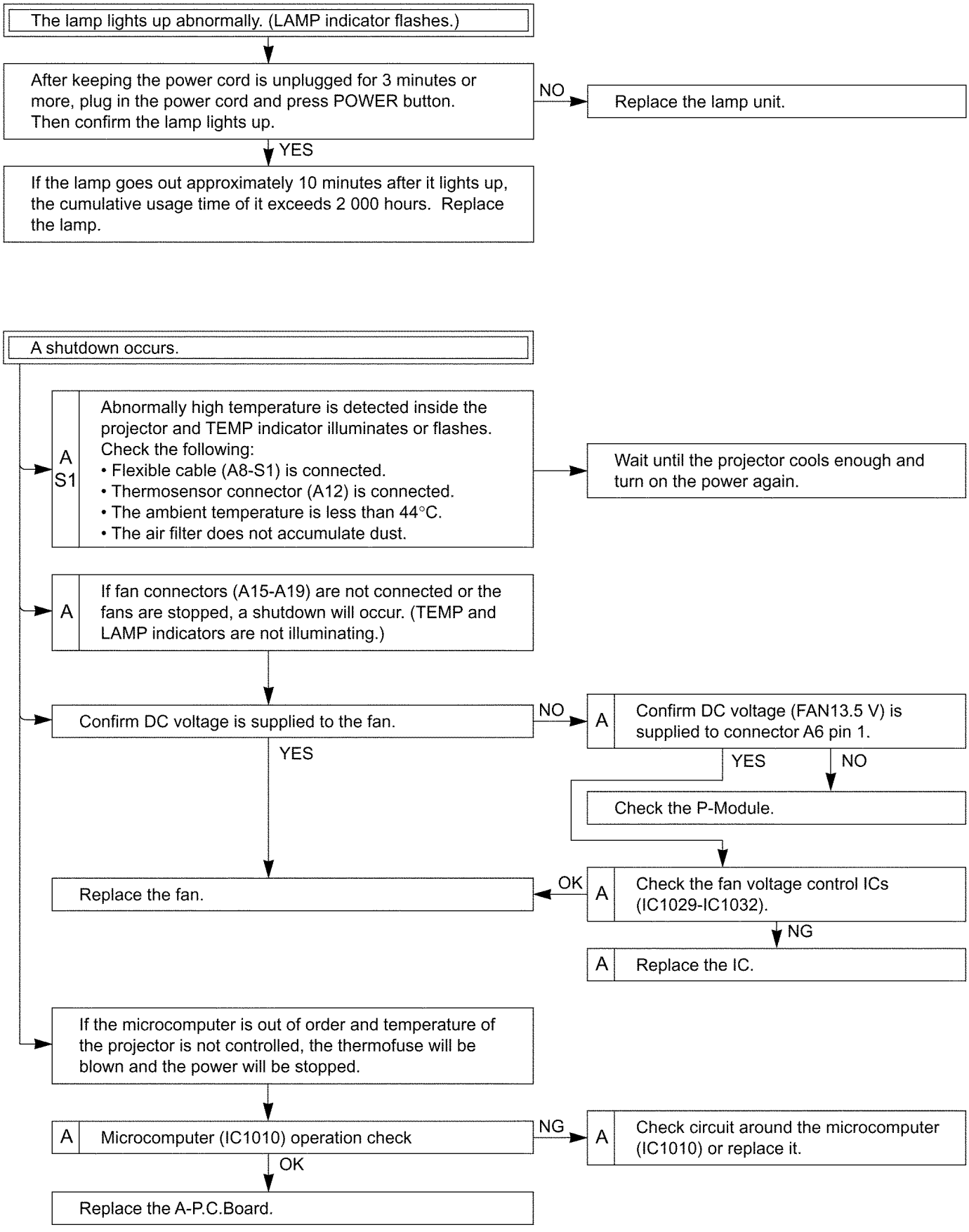
If replacing A-P.C.Board (assembly), set Model Information according to the chapter 8.9. "Model Information Setup".

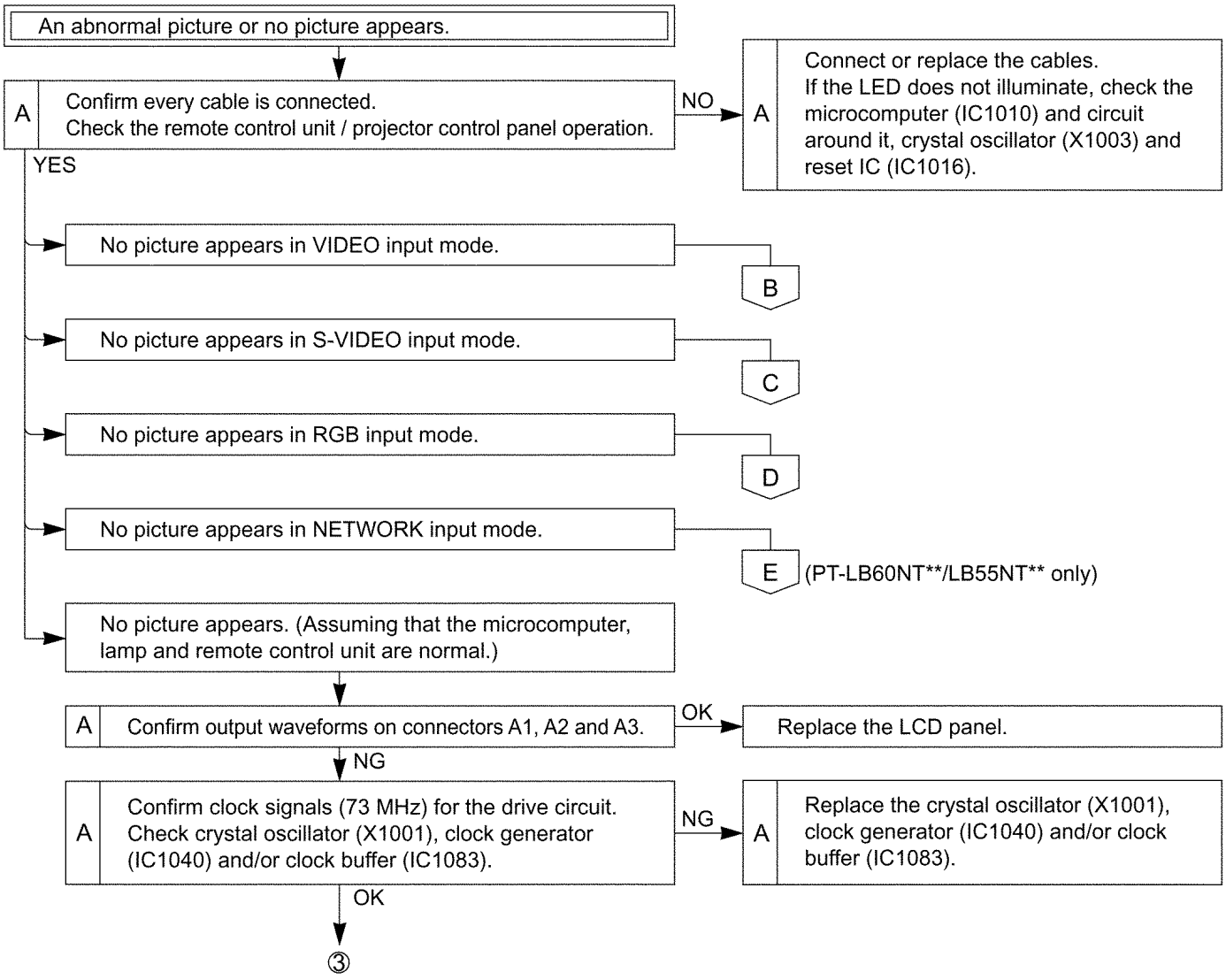


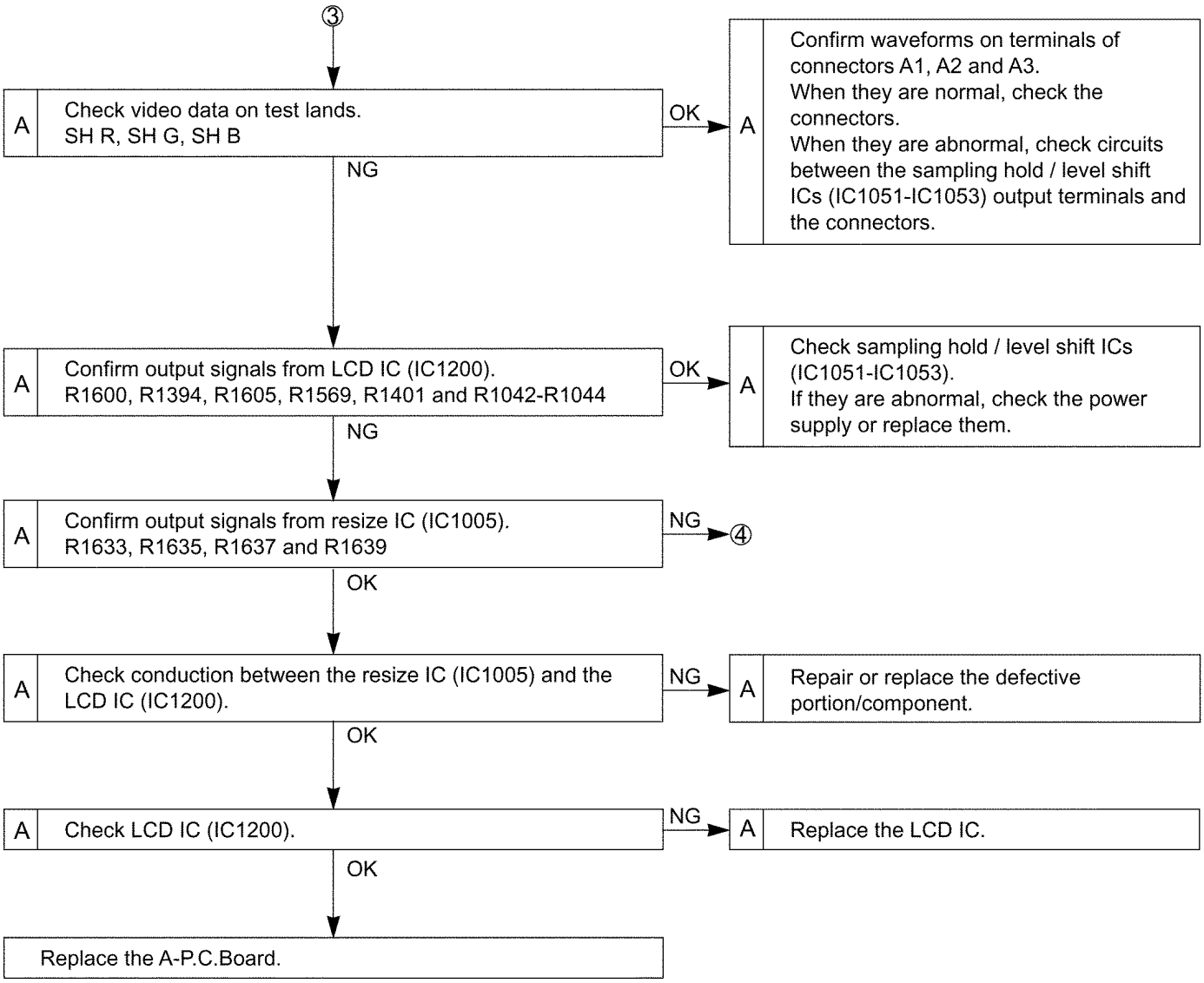

The projector does not change from standby mode to an operating mode. (The power indicator does not change from red to green.)
Confirm every connector is connected and the lamp unit cover is installed properly.
NO
Connect the connectors or install the cover properly.
YES
A
Disconnect the connector A6, confirm no short circuit has occurred in the terminals below:
A6: 1-2, 4-3, 5-6, 8-9, 11-10
YES
A
A short circuit has occurred in A6 terminals 1 (FAN14V) - 2: Check IC1029-IC1032, IC1072 and IC1085.
A short circuit has occurred in A6 terminals 4 (+17V) - 3: Check IC1050 and L1049.
A short circuit has occurred in A6 terminals 5 (+6V) - 6: Check L1081, IC1041 and IC1042.
A short circuit has occurred in A6 terminals 8 (3.3V) - 9: Check L1080, IC1027, IC1028, IC1043, L1018, L1028, L1030, L1031, L1032, L1034 and L1038.
A short circuit has occurred in A6 terminals 11 (STB3.3V) - 10: Check L1040, L1043 and L1048.
NO
A
Connector A6 pin 12 changes from LOW to HIGH.
NO
A1
YES
①
Replace the P-Module, then confirm the projector becomes standby mode.
YES
END
NO
②
Replace the Q-Module, then confirm the projector becomes standby mode.
YES
NO
OK
B
Confirm resistance values between G (positive) and S (negative) of MOS-FETs (Q9606, Q9607, Q9610 and Q9611) are as below.
Q9606, Q9610: 13-18 kΩ
Q9607, Q9611: Several kΩ
NO
B
Replace MOS-FETs (Q9606, Q9607, Q9610 and Q9611), that the resistance is less than the specified value, then confirm again the resistance values.
NG
YES
B
Confirm resistance value between D (positive) and S (negative) of Q9603 and Q9614 are hundreds kiloohm or more.
NO
B
Replace Q9603 and/or Q9614, and check R9601.
YES
A2

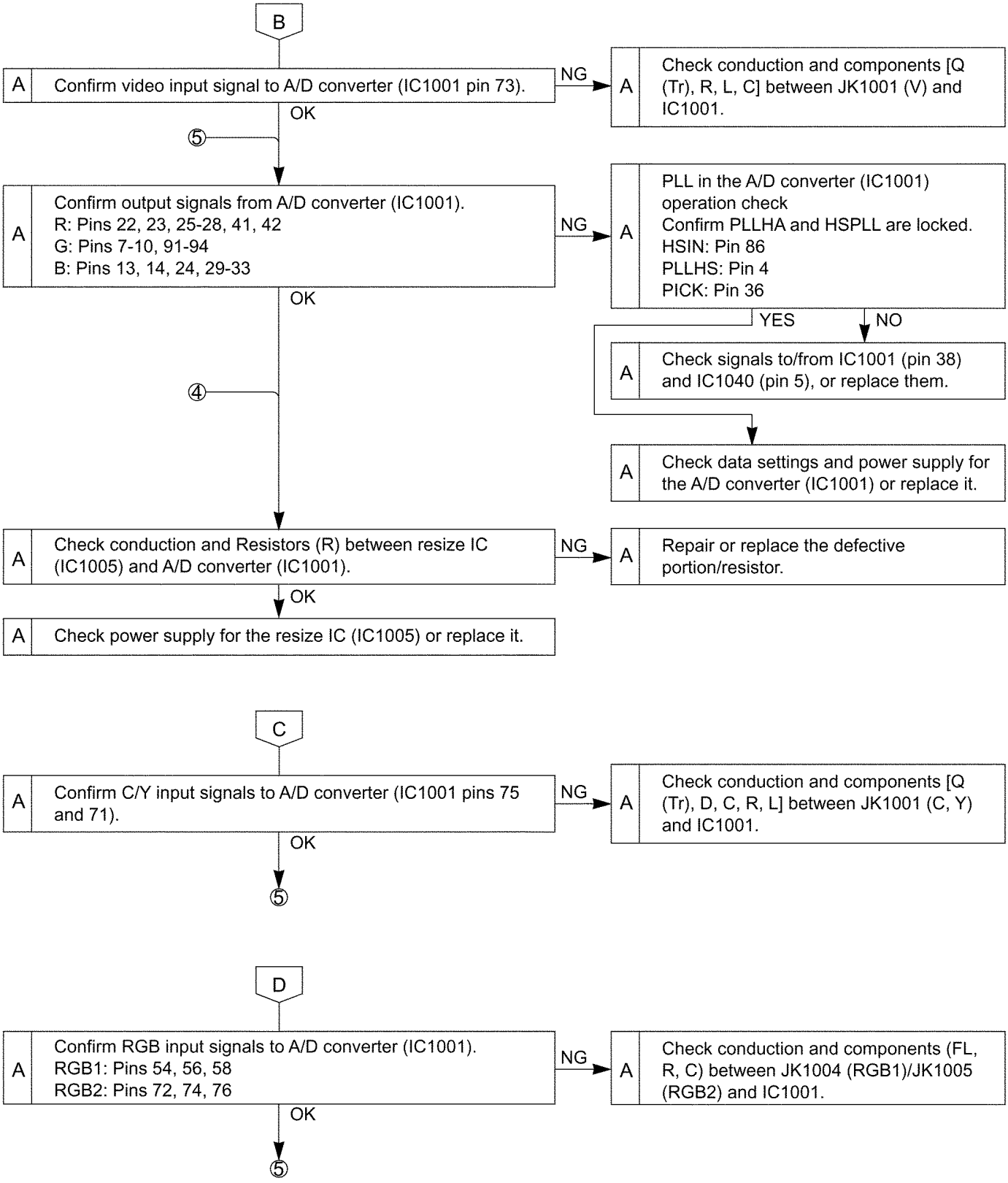

No lamp lights up. (LAMP indicator illuminates.)
Confirm every connector and the lamp unit are connected properly, and the lamp unit cover is installed.
At the same time, confirm the lamp unit fixing screws are tightened.
NO
Connect the connectors or install the cover properly.
YES
When switching from standby mode to an operating mode, every fan is rotated.
NO
Check every fan connector. If the connection is properly and the fan is not rotated, replace it. Then confirm the lamp lights up. (If not, go to the next.)
YES
Confirm every thermosensor is normal.
NO
Replace abnormal thermosensor, then confirm the lamp lights up. (If not, go to the next.)
YES
After keeping the power cord is unplugged for 3 minutes or more, plug in the power cord and press POWER button.
Confirm the ballast to generate a high-voltage pulse train and emits a sparking sound.
NO
A
When pressing the POWER button, connector A6 pin 12 changes from LOW to HIGH.
YES
NO
A3
YES
P
Confirm that no short circuit has occurred between connector P2 pins 1 and 3. (Normally, connector P2 pin 1 outputs 380 V ± 20 V DC.)
YES
A
When pressing the POWER button, connector A4 pin 2 changes from LOW to HIGH.
NO
P
Confirm that no short circuit has occurred between connector P2 pins 4 and 3. (Normally, connector P2 pin 4 outputs 15 V ± 1 V DC.)
NO
A4
YES
NO
①
②

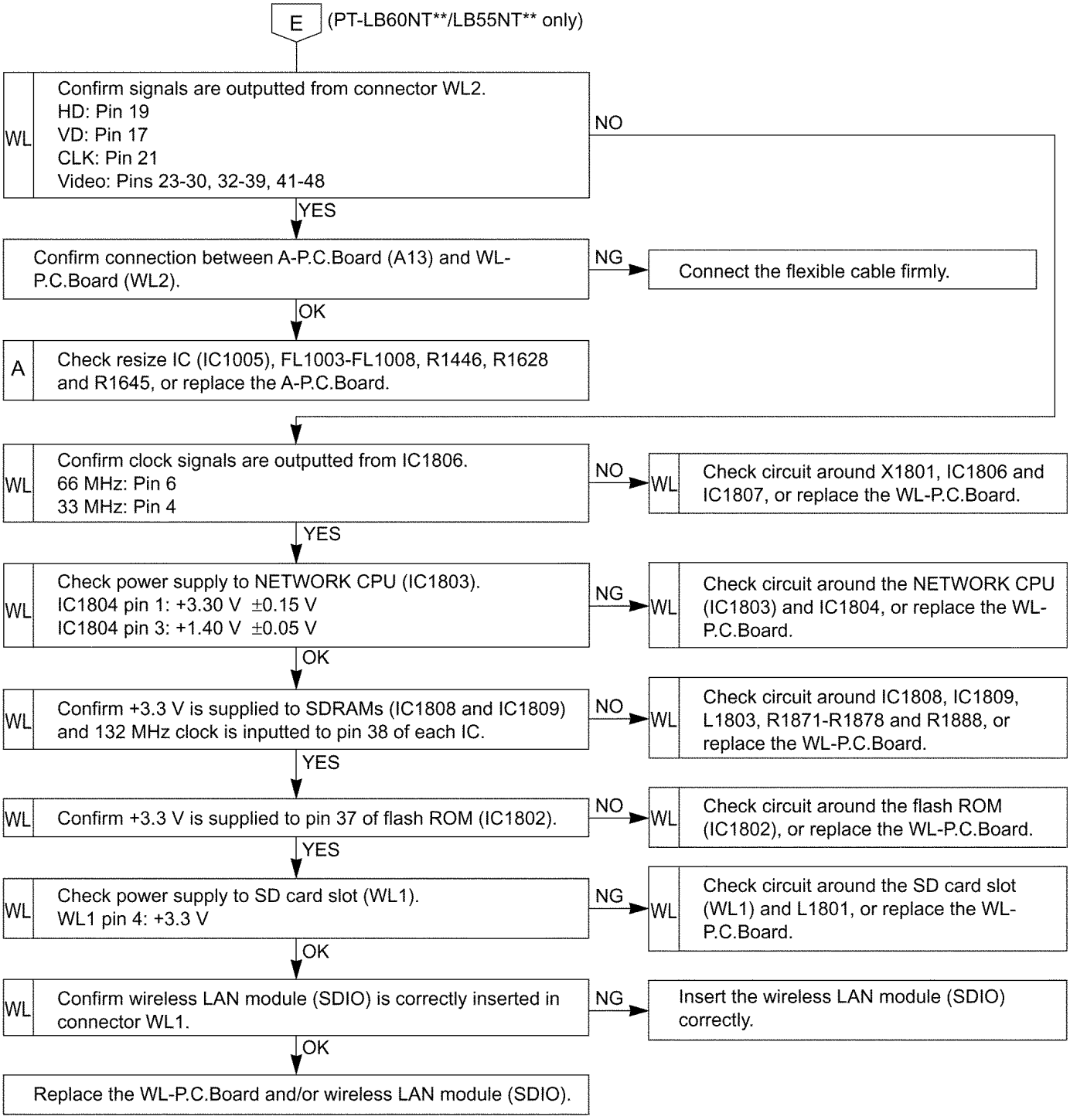

A1
Microcomputer (IC1010) operation check in the standby mode
A S1
POWER key check
When pressing SW2001, check voltage on the microcomputer (IC1010) pin 118 becomes 0.7 V.
NG
A S1
Check R1308, L1044, SW2001, R2006 and R2002.
OK
A3
A
Check MAIN_STBY output signal of the microcomputer (IC1010 pin 110).
NG
A
Replace the microcomputer (IC1010).
OK
A
Replace Q1042.
A2
B
Confirm components D9604-D9609, D9611, D9612, Q9604, Q9605, Q9608 and Q9609 are normal (no damage).
NO
B
Replace every damaged component.
YES
B
Confirm resistance values between the terminals of ICs (IC9602 and IC9603) below are 3 kΩ or more.
6 (positive) - 7 (negative)
3 (positive) - 4 (negative)
NO
B
Confirm components D9616-D9629 are normal.
NO
YES
B
Replace IC9602/IC9603.
B
Replace every abnormal component.
YES
Replace the B-Module, then confirm the projector becomes standby mode.
YES
END
NO
A
Check CLK signal is outputted from the microcomputer (IC1010) pin 107.
NO
Replace the A-P.C.Board.
YES
A
The microcomputer is abnormal.
Check the microcomputer (IC1010) and circuit around it, crystal oscillator (X1003) and reset IC (IC1016).
A4
A
Check BLST output signal of the microcomputer (IC1010 pin 109).
NG
A
Replace the microcomputer (IC1010).
OK
A
Replace Q1040.

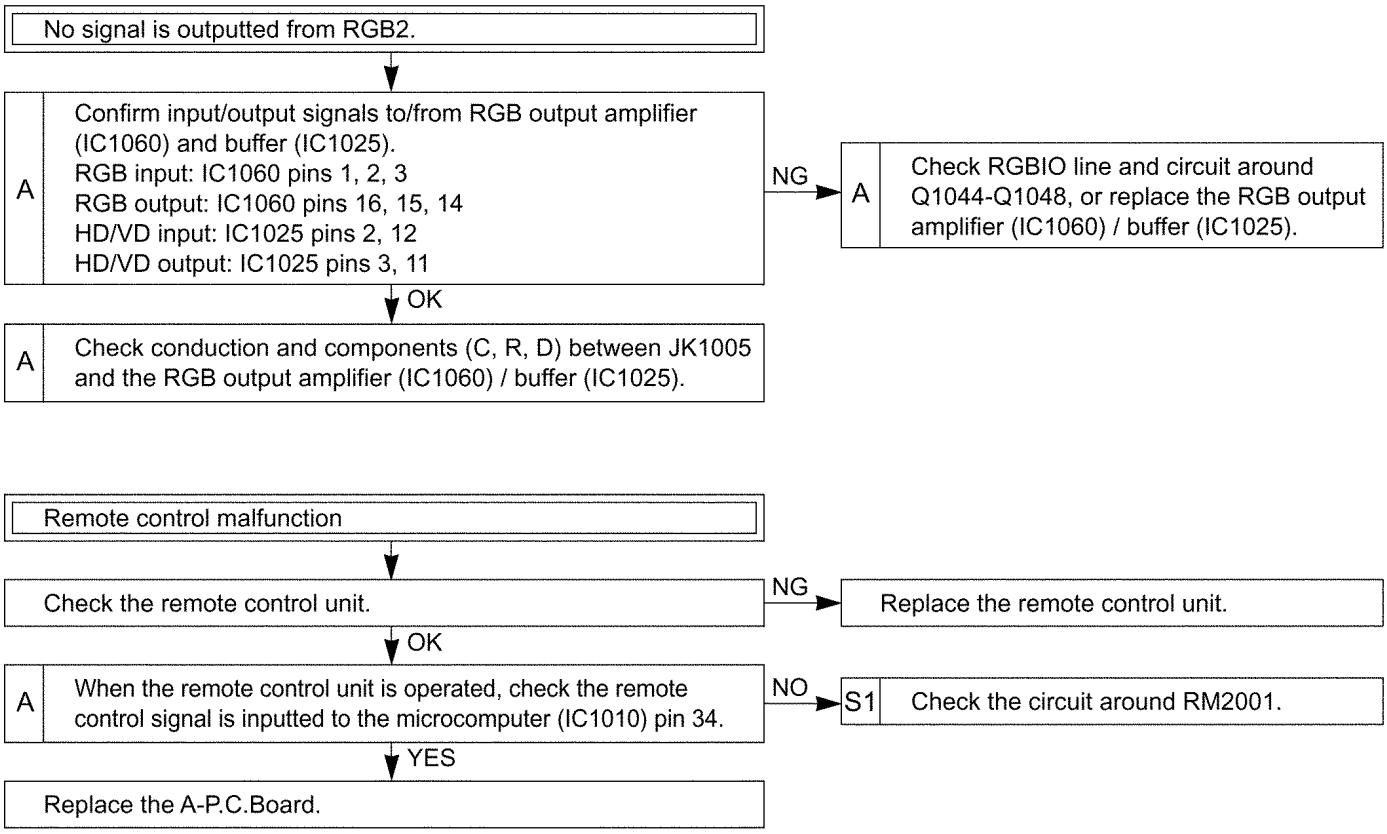

The lamp lights up abnormally. (LAMP indicator flashes.)
After keeping the power cord is unplugged for 3 minutes or more, plug in the power cord and press POWER button. Then confirm the lamp lights up.
NO
Replace the lamp unit.
YES
If the lamp goes out approximately 10 minutes after it lights up, the cumulative usage time of it exceeds 2 000 hours. Replace the lamp.
A shutdown occurs.
A S1
Abnormally high temperature is detected inside the projector and TEMP indicator illuminates or flashes. Check the following:
• Flexible cable (A8-S1) is connected.
• Thermosensor connector (A12) is connected.
• The ambient temperature is less than 44°C.
• The air filter does not accumulate dust.
Wait until the projector cools enough and turn on the power again.
A
If fan connectors (A15-A19) are not connected or the fans are stopped, a shutdown will occur. (TEMP and LAMP indicators are not illuminating.)
Confirm DC voltage is supplied to the fan.
NO
A
Confirm DC voltage (FAN13.5 V) is supplied to connector A6 pin 1.
YES
NO
Check the P-Module.
YES
Replace the fan.
OK
A
Check the fan voltage control ICs (IC1029-IC1032).
NG
A
Replace the IC.
If the microcomputer is out of order and temperature of the projector is not controlled, the thermofuse will be blown and the power will be stopped.
A
Microcomputer (IC1010) operation check
NG
A
Check circuit around the microcomputer (IC1010) or replace it.
OK
Replace the A-P.C.Board.

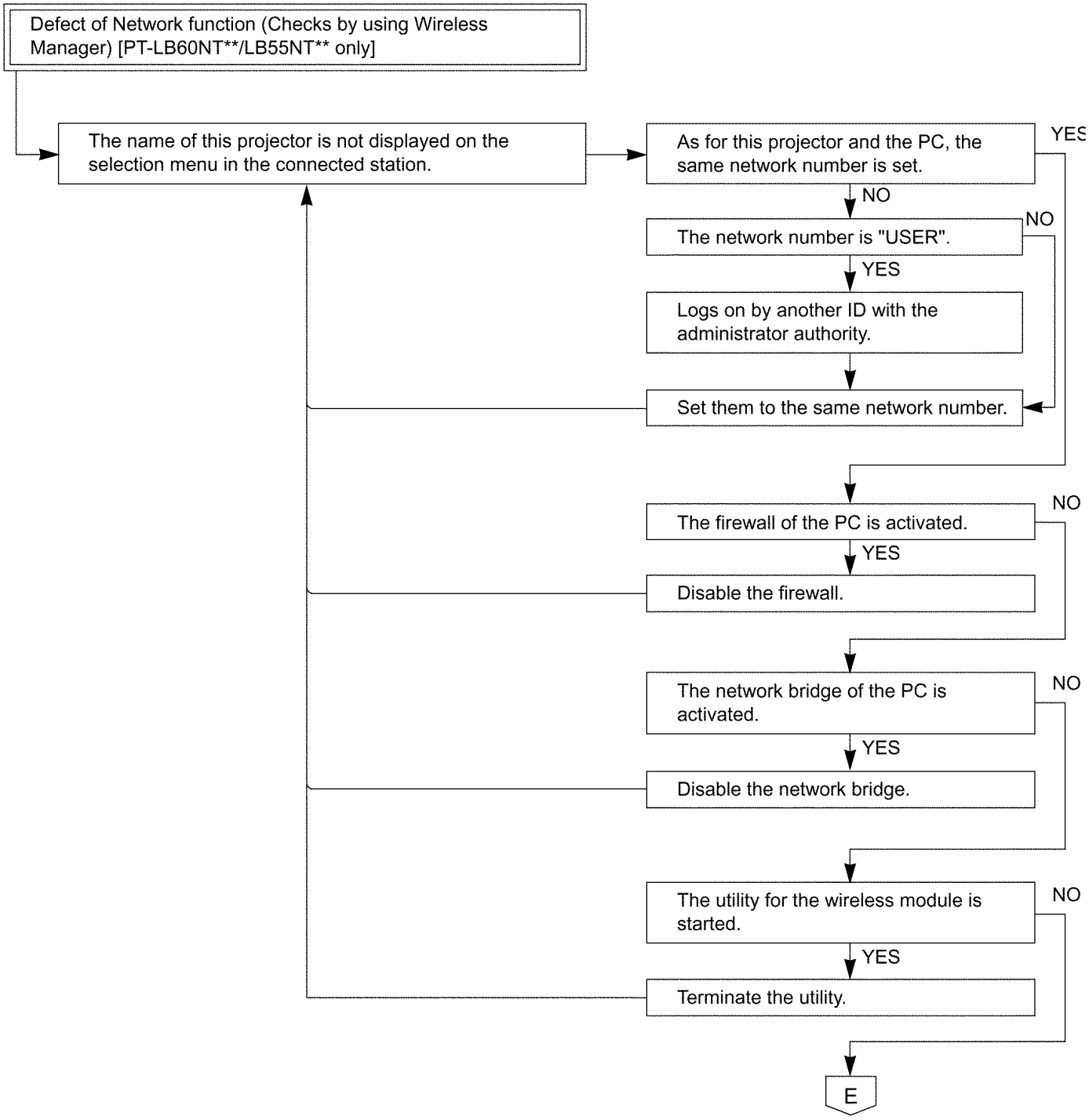

An abnormal picture or no picture appears.
A
Confirm every cable is connected.
Check the remote control unit / projector control panel operation.
NO
A
Connect or replace the cables.
If the LED does not illuminate, check the microcomputer (IC1010) and circuit around it, crystal oscillator (X1003) and reset IC (IC1016).
YES
No picture appears in VIDEO input mode.
B
No picture appears in S-VIDEO input mode.
C
No picture appears in RGB input mode.
D
No picture appears in NETWORK input mode.
E
(PT-LB60NT**/LB55NT** only)
No picture appears. (Assuming that the microcomputer, lamp and remote control unit are normal.)
A
Confirm output waveforms on connectors A1, A2 and A3.
OK
Replace the LCD panel.
NG
A
Confirm clock signals (73 MHz) for the drive circuit.
Check crystal oscillator (X1001), clock generator (IC1040) and/or clock buffer (IC1083).
NG
A
Replace the crystal oscillator (X1001), clock generator (IC1040) and/or clock buffer (IC1083).
OK
③


③
A
Check video data on test lands.
SH R, SH G, SH B
OK
A
Confirm waveforms on terminals of connectors A1, A2 and A3.
When they are normal, check the connectors.
When they are abnormal, check circuits between the sampling hold / level shift ICs (IC1051-IC1053) output terminals and the connectors.
NG
A
Confirm output signals from LCD IC (IC1200).
R1600, R1394, R1605, R1569, R1401 and R1042-R1044
OK
A
Check sampling hold / level shift ICs (IC1051-IC1053).
If they are abnormal, check the power supply or replace them.
NG
A
Confirm output signals from resize IC (IC1005).
R1633, R1635, R1637 and R1639
NG
④
OK
A
Check conduction between the resize IC (IC1005) and the LCD IC (IC1200).
NG
A
Repair or replace the defective portion/component.
OK
A
Check LCD IC (IC1200).
NG
A
Replace the LCD IC.
OK
Replace the A-P.C.Board.


B
A
Confirm video input signal to A/D converter (IC1001 pin 73).
NG
A
Check conduction and components [Q (Tr), R, L, C] between JK1001 (V) and IC1001.
OK
⑤
A
Confirm output signals from A/D converter (IC1001).
R: Pins 22, 23, 25-28, 41, 42
G: Pins 7-10, 91-94
B: Pins 13, 14, 24, 29-33
NG
A
PLL in the A/D converter (IC1001) operation check
Confirm PLLHA and HSPLL are locked.
HSIN: Pin 86
PLLHS: Pin 4
PICK: Pin 36
OK
YES
NO
A
Check signals to/from IC1001 (pin 38) and IC1040 (pin 5), or replace them.
④
A
Check data settings and power supply for the A/D converter (IC1001) or replace it.
A
Check conduction and Resistors (R) between resize IC (IC1005) and A/D converter (IC1001).
NG
A
Repair or replace the defective portion/resistor.
OK
A
Check power supply for the resize IC (IC1005) or replace it.
C
A
Confirm C/Y input signals to A/D converter (IC1001 pins 75 and 71).
NG
A
Check conduction and components [Q (Tr), D, C, R, L] between JK1001 (C, Y) and IC1001.
OK
⑤
D
A
Confirm RGB input signals to A/D converter (IC1001).
RGB1: Pins 54, 56, 58
RGB2: Pins 72, 74, 76
NG
A
Check conduction and components (FL, R, C) between JK1004 (RGB1)/JK1005 (RGB2) and IC1001.
OK
⑤

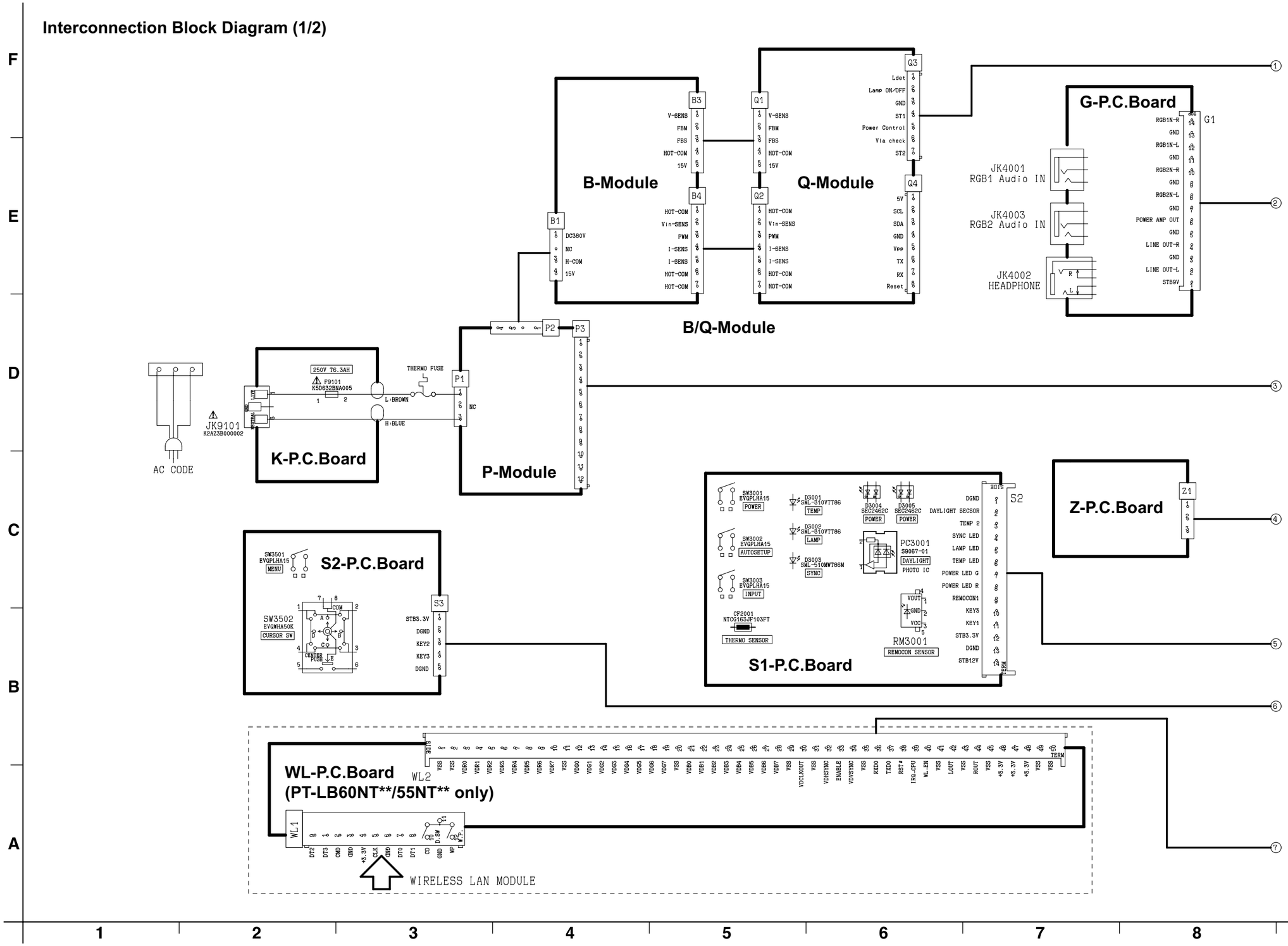

E
(PT-LB60NT**/LB55NT** only)
WL
Confirm signals are outputted from connector WL2.
HD: Pin 19
VD: Pin 17
CLK: Pin 21
Video: Pins 23-30, 32-39, 41-48
NO
YES
Confirm connection between A-P.C.Board (A13) and WL-P.C.Board (WL2).
NG
Connect the flexible cable firmly.
OK
A
Check resize IC (IC1005), FL1003-FL1008, R1446, R1628 and R1645, or replace the A-P.C.Board.
WL
Confirm clock signals are outputted from IC1806.
66 MHz: Pin 6
33 MHz: Pin 4
NO
WL
Check circuit around X1801, IC1806 and IC1807, or replace the WL-P.C.Board.
YES
WL
Check power supply to NETWORK CPU (IC1803).
IC1804 pin 1: +3.30 V ±0.15 V
IC1804 pin 3: +1.40 V ±0.05 V
NG
WL
Check circuit around the NETWORK CPU (IC1803) and IC1804, or replace the WL-P.C.Board.
OK
WL
Confirm +3.3 V is supplied to SDRAMs (IC1808 and IC1809) and 132 MHz clock is inputted to pin 38 of each IC.
NO
WL
Check circuit around IC1808, IC1809, L1803, R1871-R1878 and R1888, or replace the WL-P.C.Board.
YES
WL
Confirm +3.3 V is supplied to pin 37 of flash ROM (IC1802).
NO
WL
Check circuit around the flash ROM (IC1802), or replace the WL-P.C.Board.
YES
WL
Check power supply to SD card slot (WL1).
WL1 pin 4: +3.3 V
NG
WL
Check circuit around the SD card slot (WL1) and L1801, or replace the WL-P.C.Board.
OK
WL
Confirm wireless LAN module (SDIO) is correctly inserted in connector WL1.
NG
Insert the wireless LAN module (SDIO) correctly.
OK
Replace the WL-P.C.Board and/or wireless LAN module (SDIO).


No signal is outputted from RGB2.
A
Confirm input/output signals to/from RGB output amplifier (IC1060) and buffer (IC1025).
RGB input: IC1060 pins 1, 2, 3
RGB output: IC1060 pins 16, 15, 14
HD/VD input: IC1025 pins 2, 12
HD/VD output: IC1025 pins 3, 11
NG
A
Check RGBIO line and circuit around Q1044-Q1048, or replace the RGB output amplifier (IC1060) / buffer (IC1025).
OK
A
Check conduction and components (C, R, D) between JK1005 and the RGB output amplifier (IC1060) / buffer (IC1025).
Remote control malfunction
Check the remote control unit.
NG
Replace the remote control unit.
OK
A
When the remote control unit is operated, check the remote control signal is inputted to the microcomputer (IC1010) pin 34.
NO
S1
Check the circuit around RM2001.
YES
Replace the A-P.C.Board.

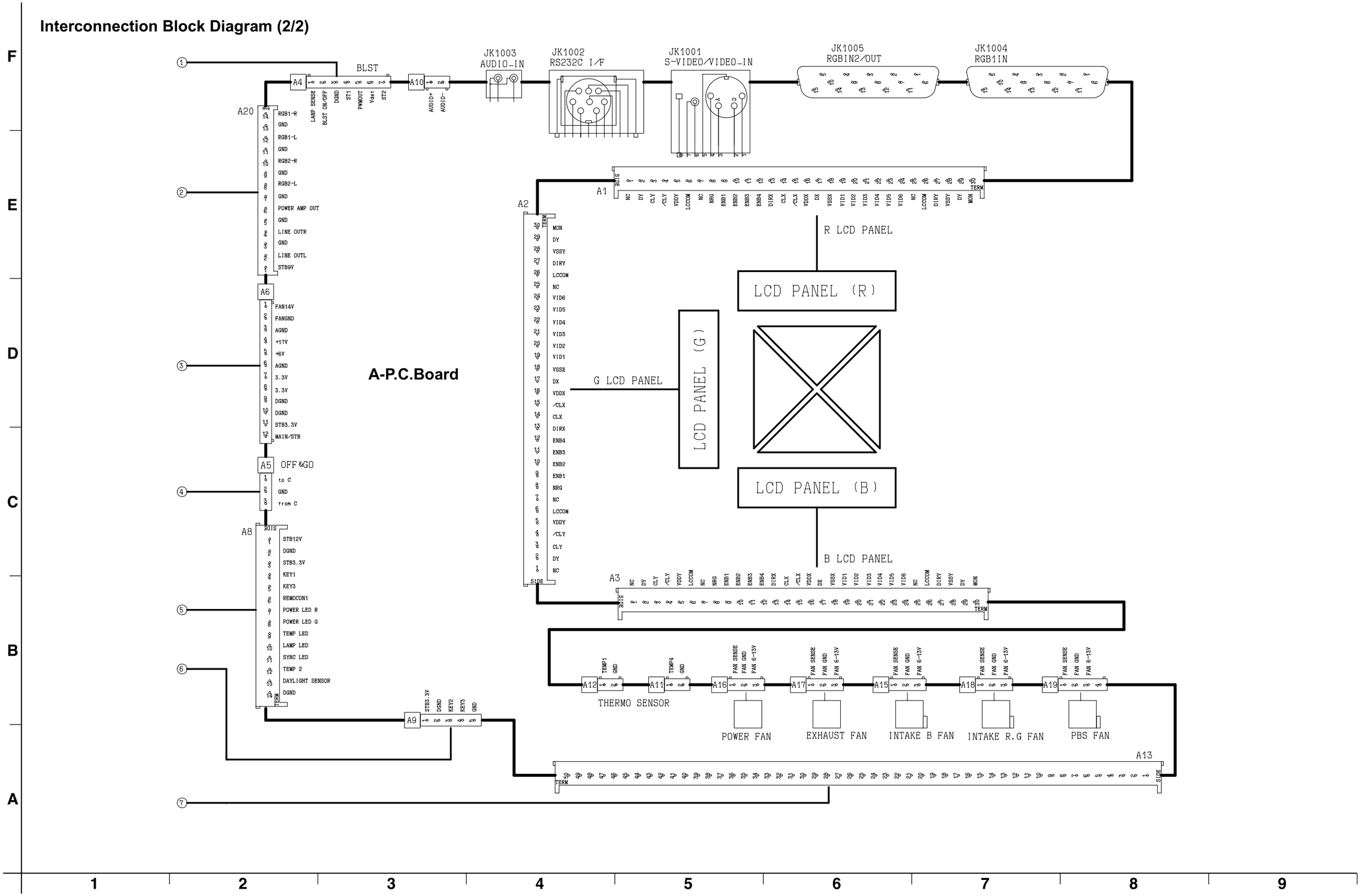

Defect of Network function (Checks by using Wireless Manager) [PT-LB60NT**/LB55NT** only]
The name of this projector is not displayed on the selection menu in the connected station.
As for this projector and the PC, the same network number is set.
YES
NO
The network number is "USER".
NO
YES
Logs on by another ID with the administrator authority.
Set them to the same network number.
The firewall of the PC is activated.
NO
YES
Disable the firewall.
The network bridge of the PC is activated.
NO
YES
Disable the network bridge.
The utility for the wireless module is started.
NO
YES
Terminate the utility.
E

10 Interconnection Block Diagram

10.1. Interconnection Block Diagram (1/2)

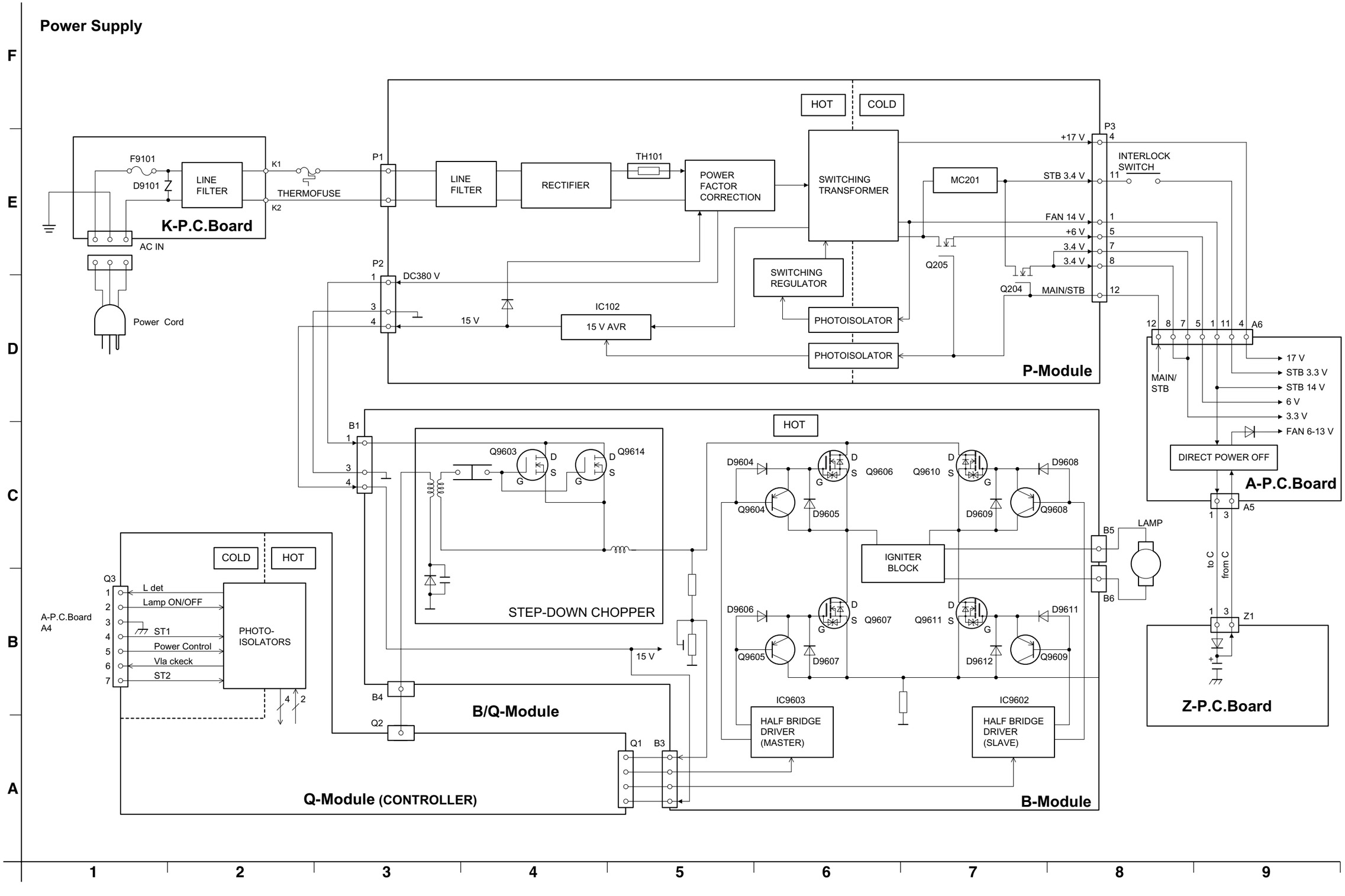


10.2. Interconnection Block Diagram (2/2)



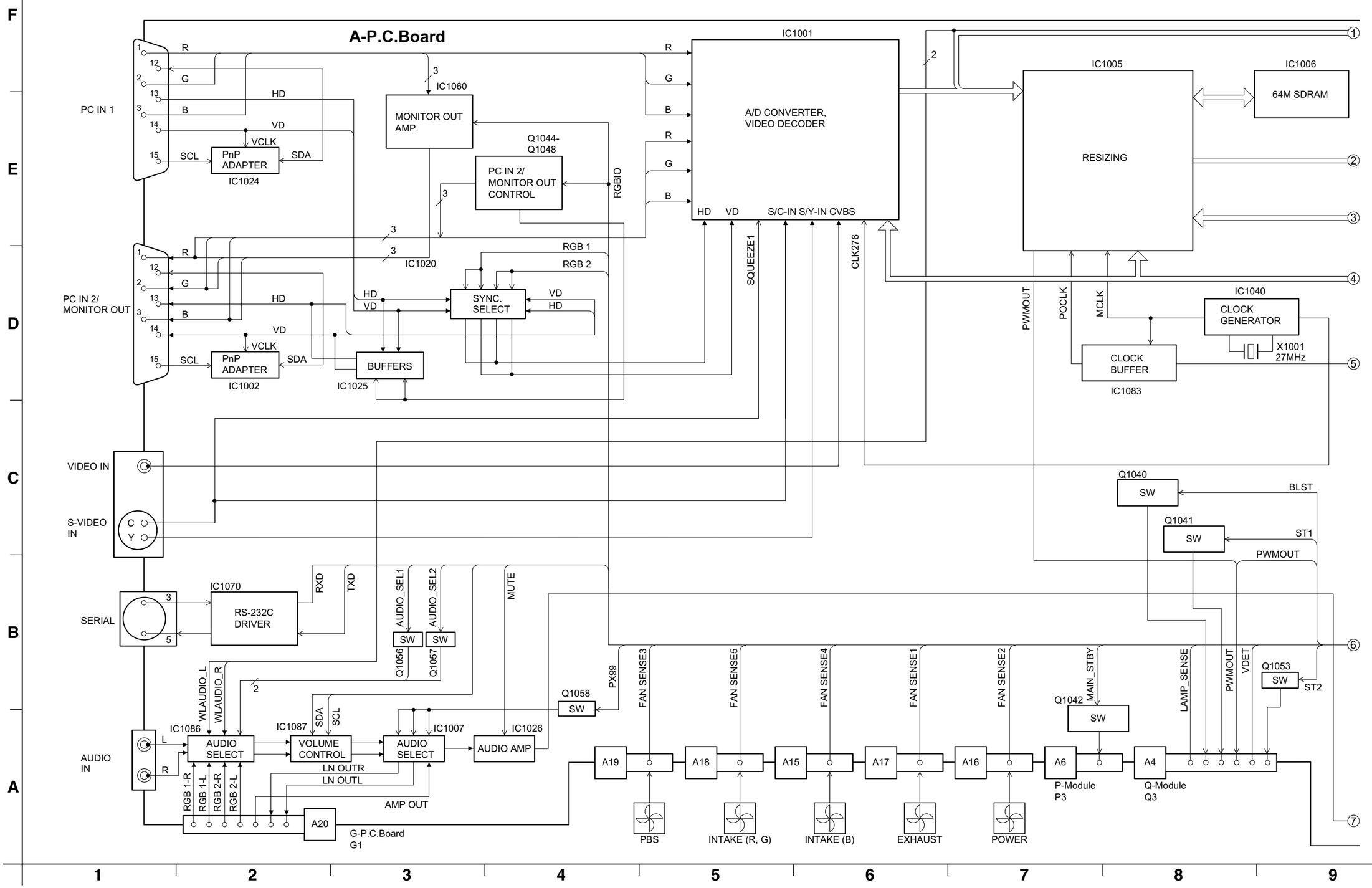
11 Block Diagram

11.1. Power Supply

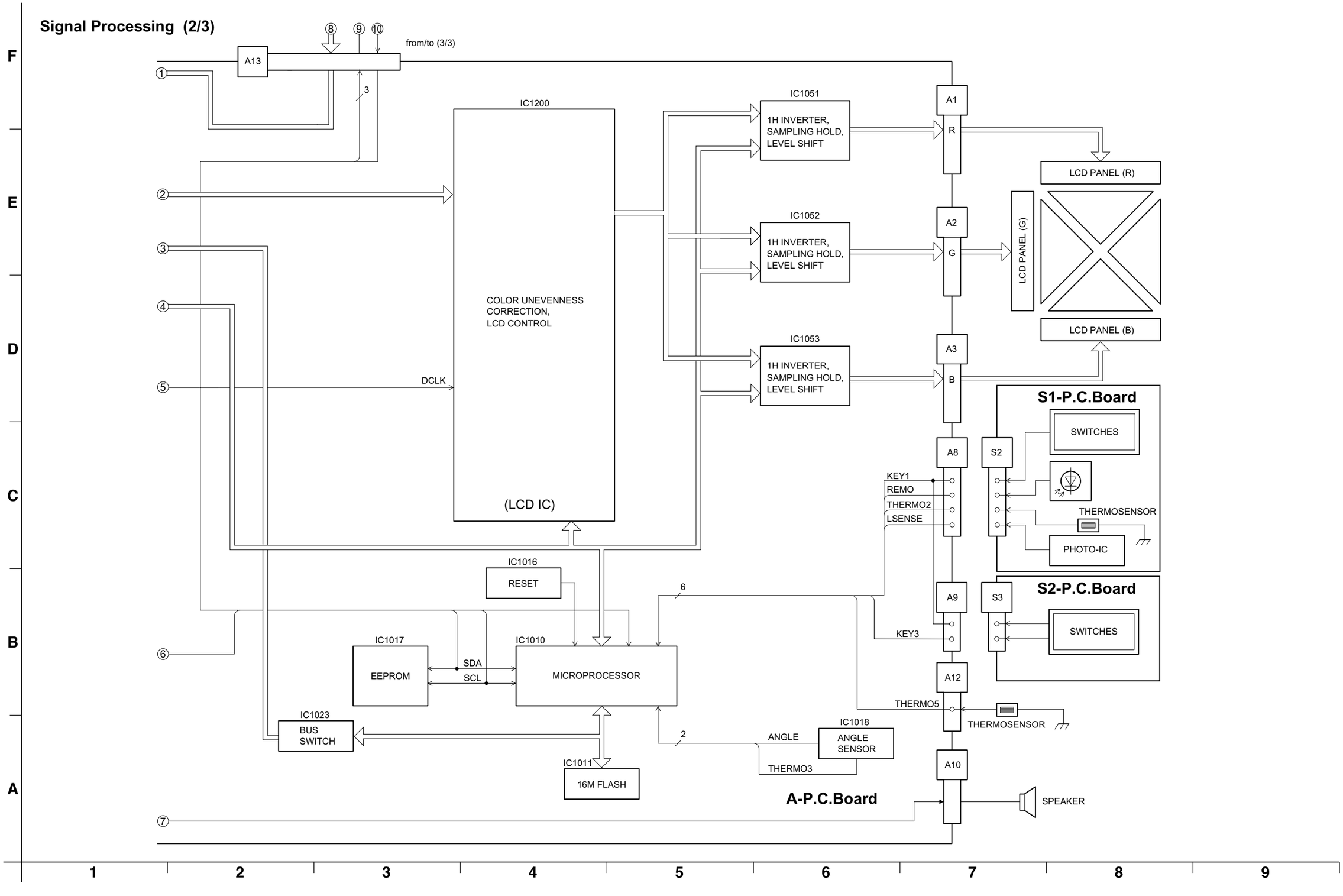


11.2. Signal Processing (1/3)

Signal Processing (1/3)



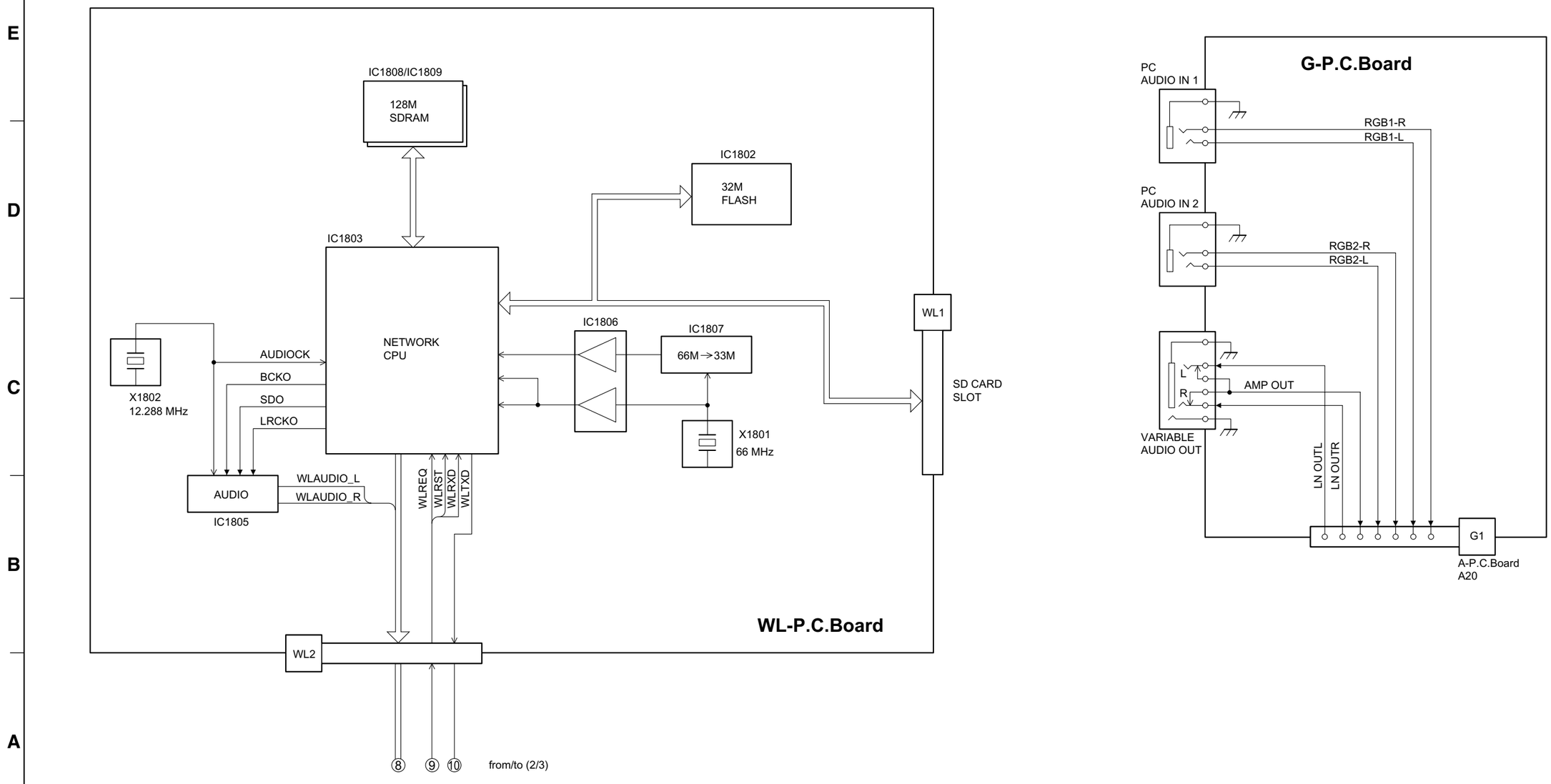
11.3. Signal Processing (2/3)



11.4. Signal Processing (3/3)

Signal Processing (3/3)

PT-LB60NTU/E/EA, LB55NTE/EA only



12 Schematic Diagram

Schematic Diagram for Model PT-LB60NTU/LB60U

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS.
WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

Schematic Diagram for Model PT-LB60NTE/EA, LB60EA, LB55NTE/EA, LB55EA

Important Safety Notice

Components identified by the international symbol ⚠ have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified ones.

Notes:

1. **Resistor**

   All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [Ω] (K=1 000 M=1 000 000).

   ○ : Nonflammable
   ⊠ : Metal Oxide
   △ : Solid
   ◎ : Metal Film
   ⊘ : Wire Wound
   ⊗ : Fuse

2. **Capacitor**

   ⊗ : Temperature Compensation
   ⧺ : Electrolytic
   Ⓜ : Polyester
   NP⧺ : Bipolar
   ⓜ : Metalized Polyester
   Ⓣ : Dipped Tantalum
   ⊠ : Polypropylene
   Ⓩ : Z-Type

3. **Coil**

   The unit of inductance is a H, unless otherwise noted.

4. **Test Point**

   ● : Test Point

5. **Voltage Measurement**

   The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the standard condition.

6. **Color code for the links between diagrams and circuit boards**

From/To		To/From	Color code
Block diagram	⟷	Schematic diagram	Magenta
Schematic diagram	⟷	Schematic diagram	Green
Schematic diagram	⟷	Circuit boards	Yellow
Schematic diagram	⟷	Waveforms	Cyan (Light blue)

7. **HOT and COLD indications**

   The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the precautions below:

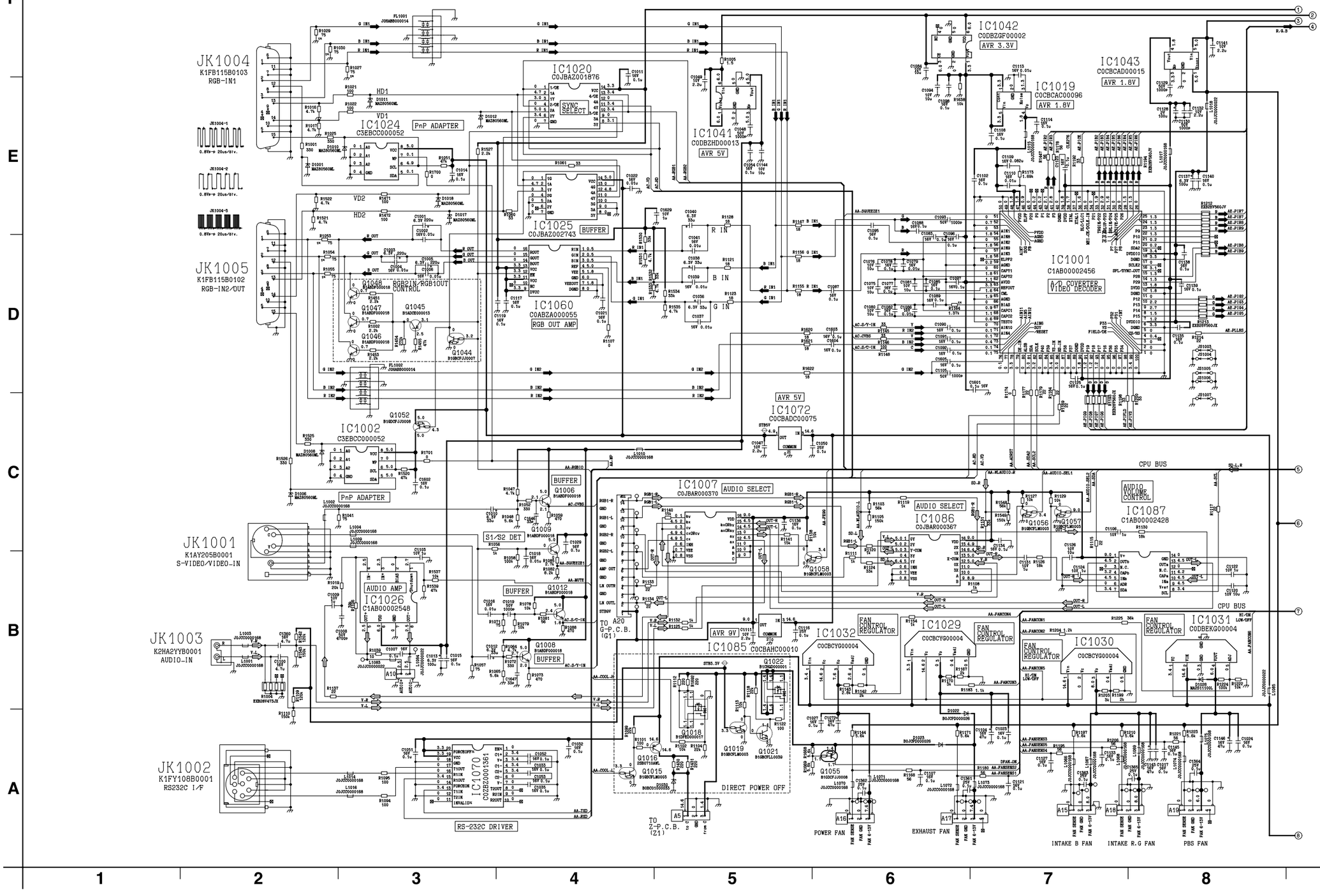
8. **This schematic diagram is the latest at the time of printing and the subject to change without notice.**

Precautions:

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow.Connect the ground of instruments to the ground of the circuit being measured.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.

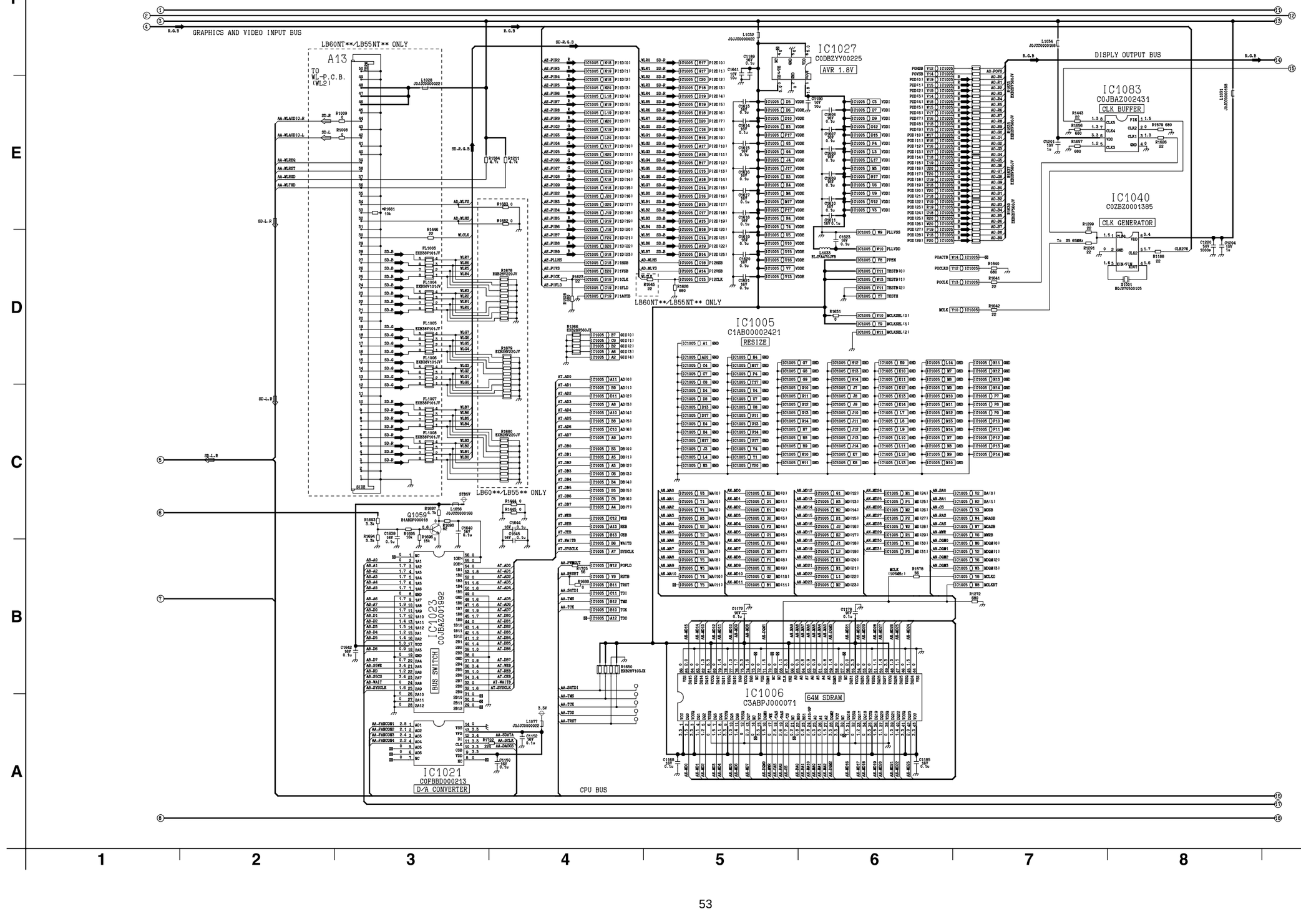
12.1. A-P.C.Board (1/4)

A-P.C.Board (1/4) TXANP01VKB7 (PT-LB60NTU/E/EA, PT-LB55NTE/EA) TXANP01QBYZ (PT-LB60U/EA, PT-LB55EA)



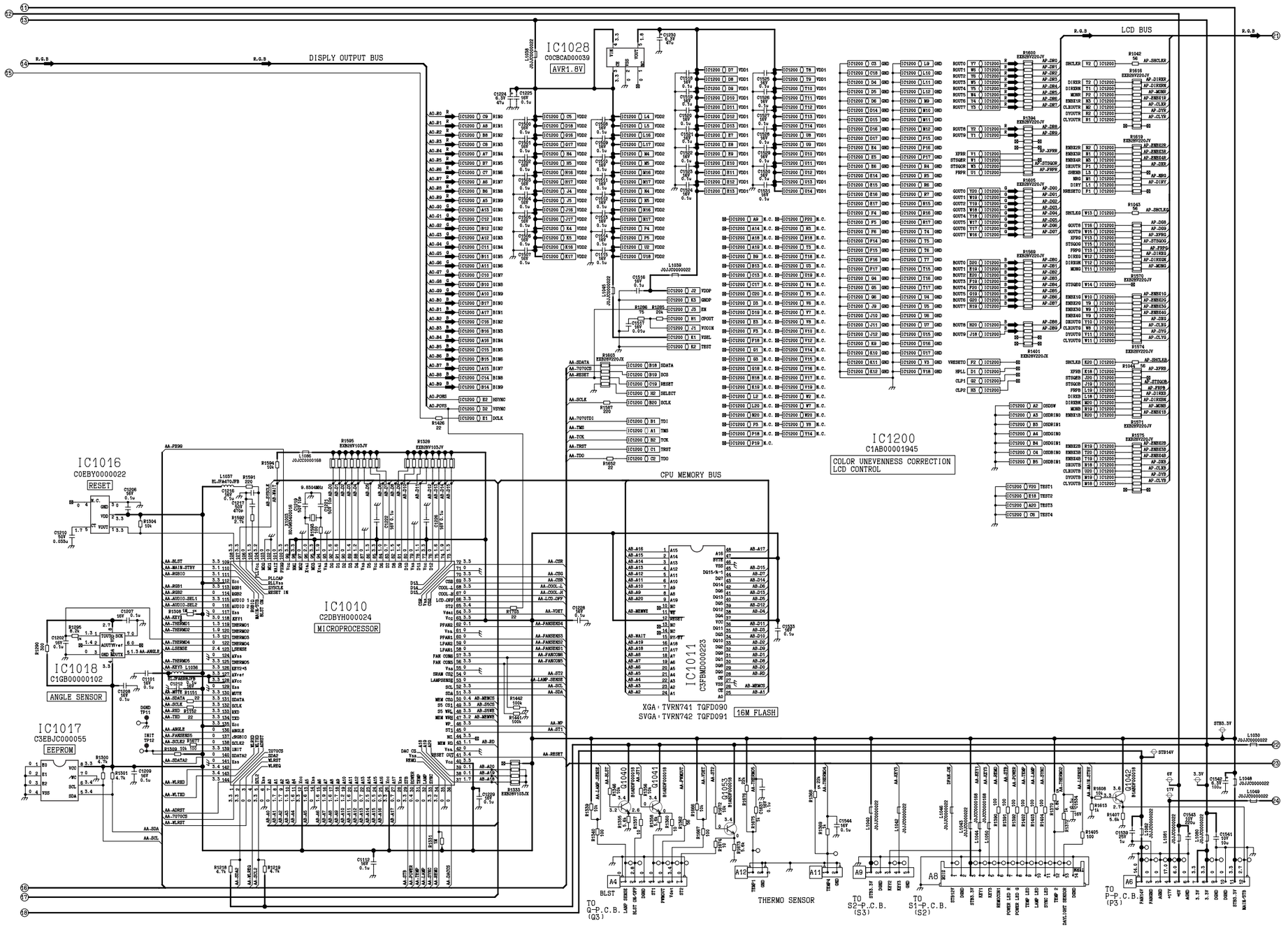
12.2. A-P.C.Board (2/4)

A-P.C.Board (2/4) TXANP01VKB7 (PT-LB60NTU/E/EA, PT-LB55NTE/EA)
TXANP01QBYZ (PT-LB60U/EA, PT-LB55EA)



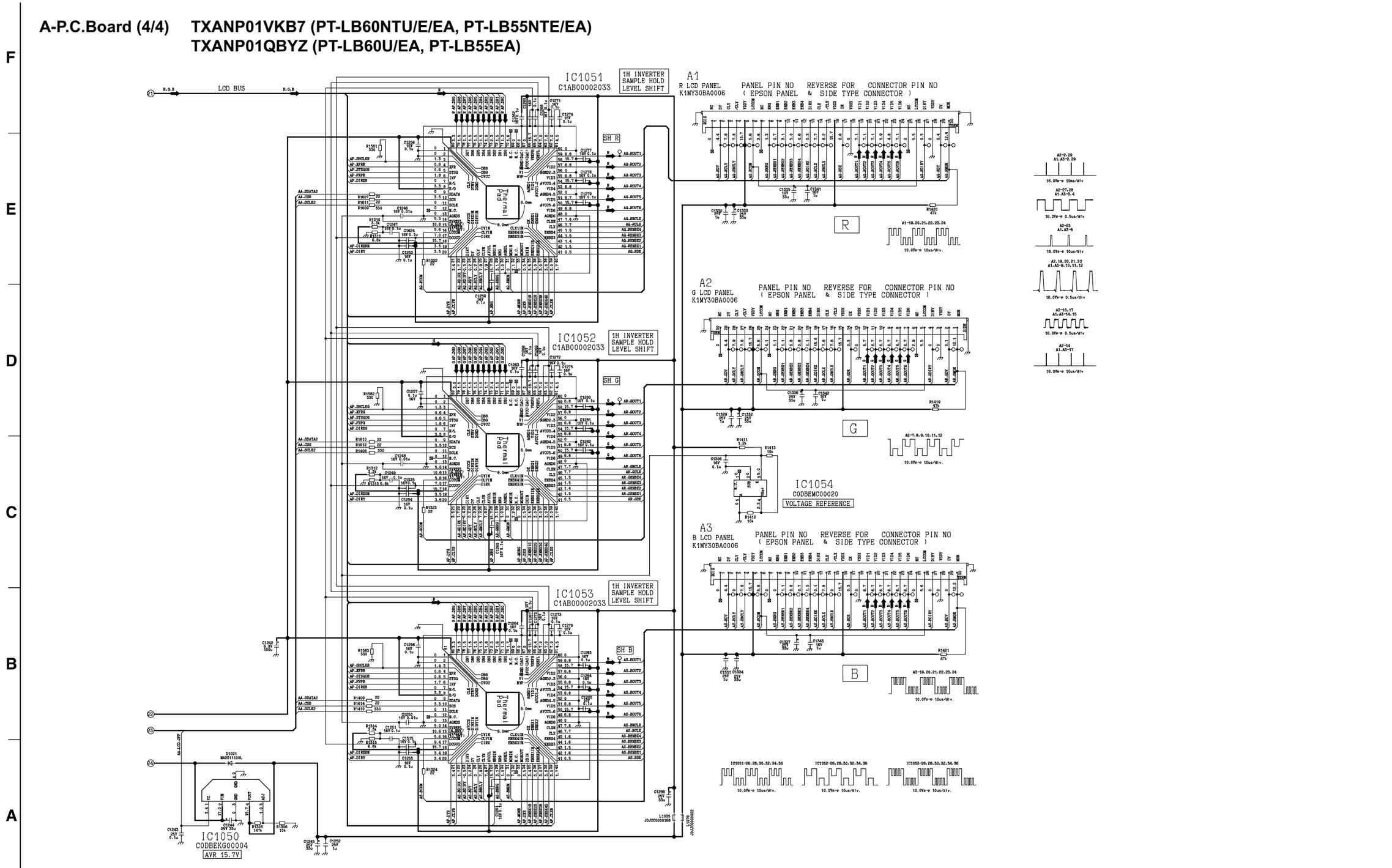
12.3. A-P.C.Board (3/4)

A-P.C.Board (3/4) TXANP01VKB7 (PT-LB60NTU/E/EA, PT-LB55NTE/EA)
TXANP01QBYZ (PT-LB60U/EA, PT-LB55EA)



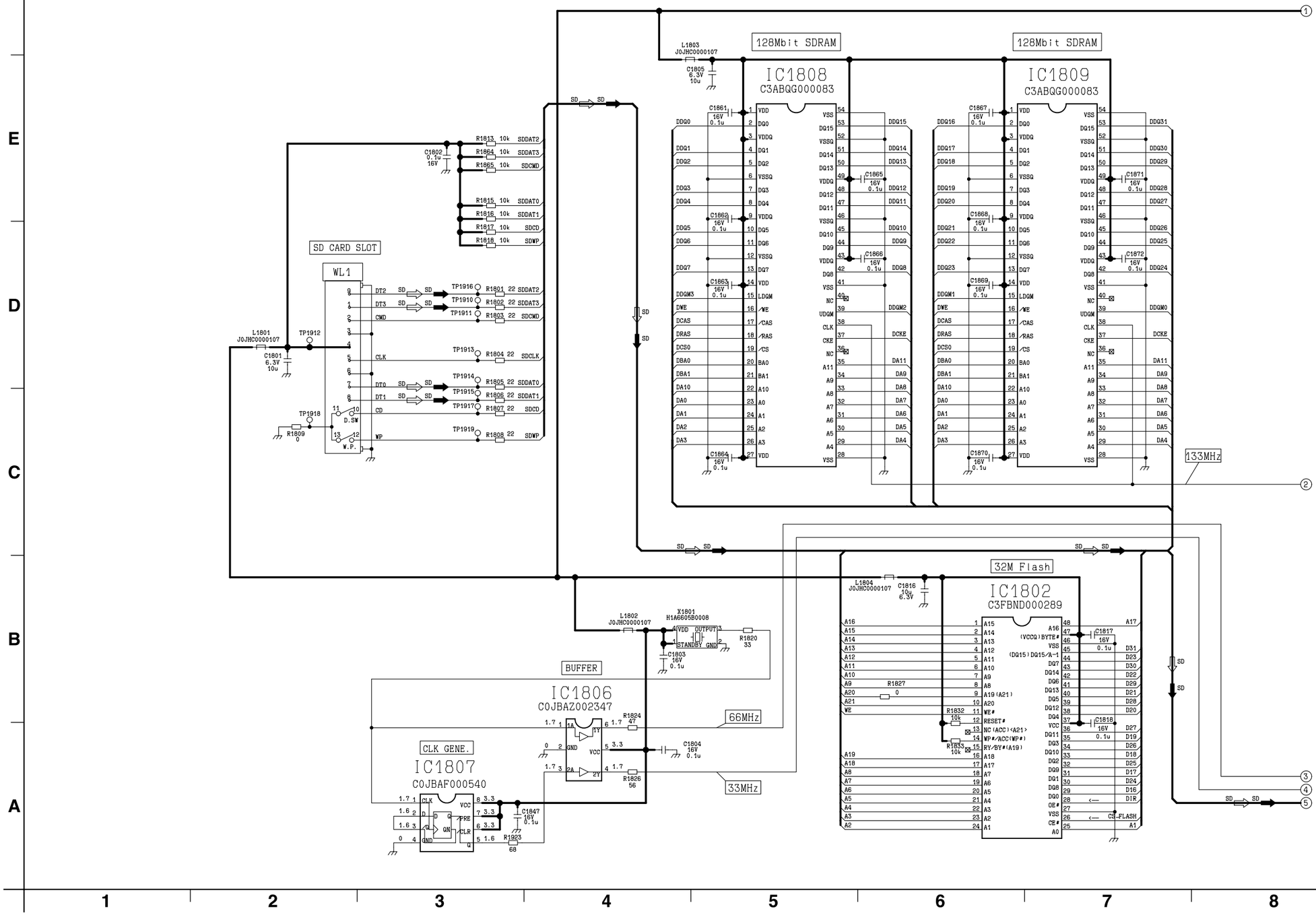
12.4. A-P.C.Board (4/4)

A-P.C.Board (4/4) **TXANP01VKB7 (PT-LB60NTU/E/EA, PT-LB55NTE/EA)**
TXANP01QBYZ (PT-LB60U/EA, PT-LB55EA)



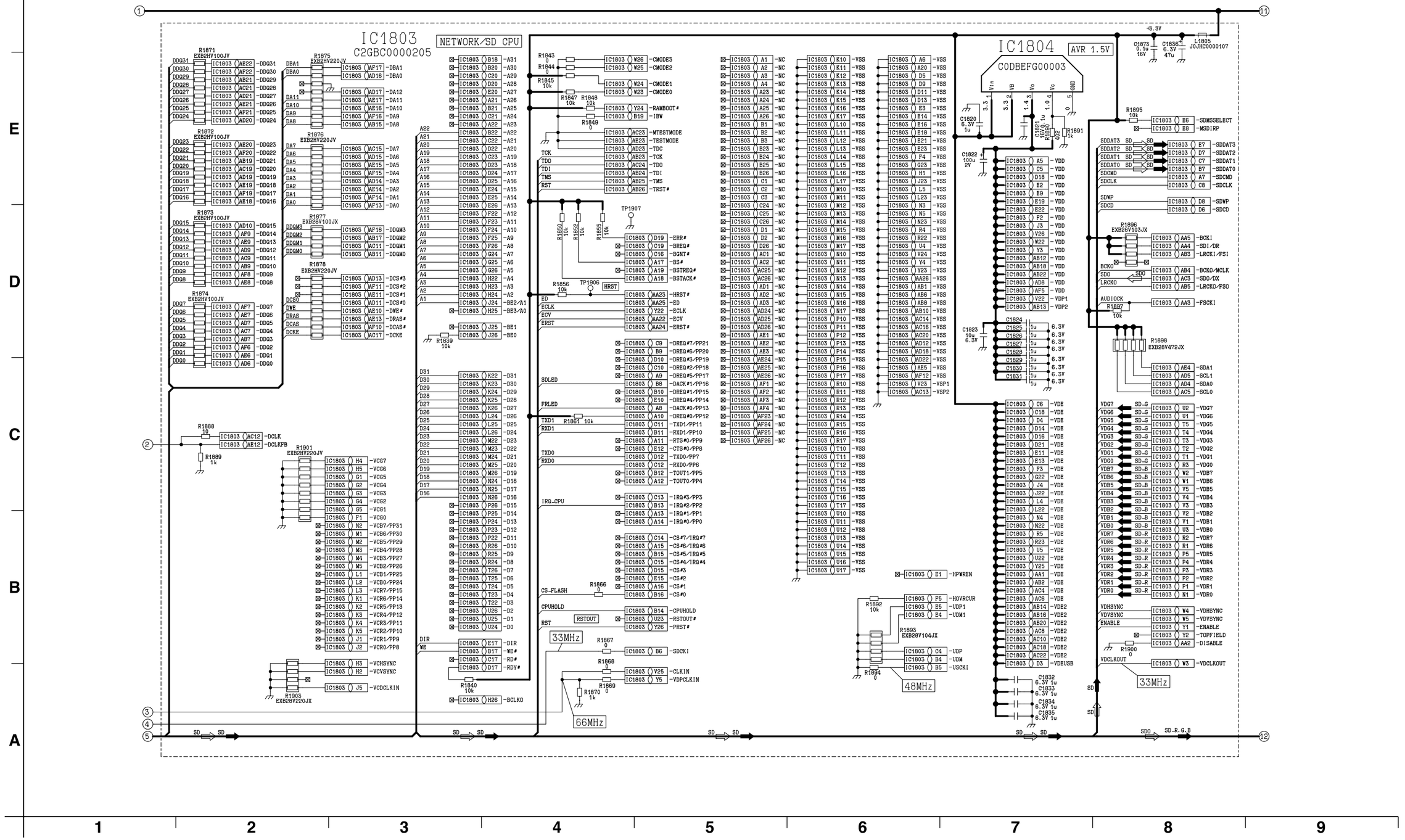
12.5. WL-P.C.Board (1/3)

WL-P.C.Board (1/3) TNPA3876 (PT-LB60NTU/E/EA, LB55NTE/EA)



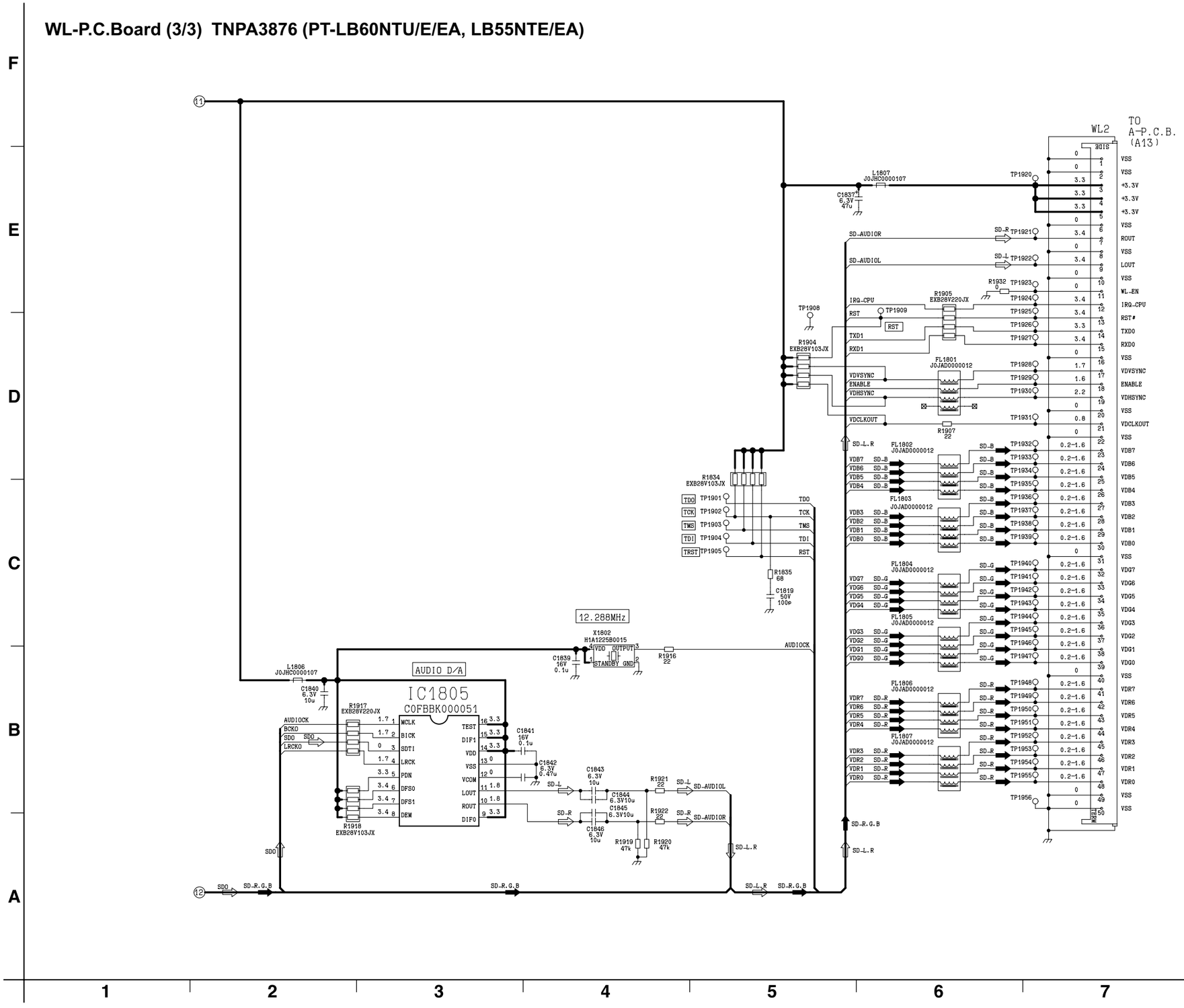
12.6. WL-P.C.Board (2/3)

WL-P.C.Board (2/3) TNPA3876 (PT-LB60NTU/E/EA, LB55NTE/EA)



12.7. WL-P.C.Board (3/3)

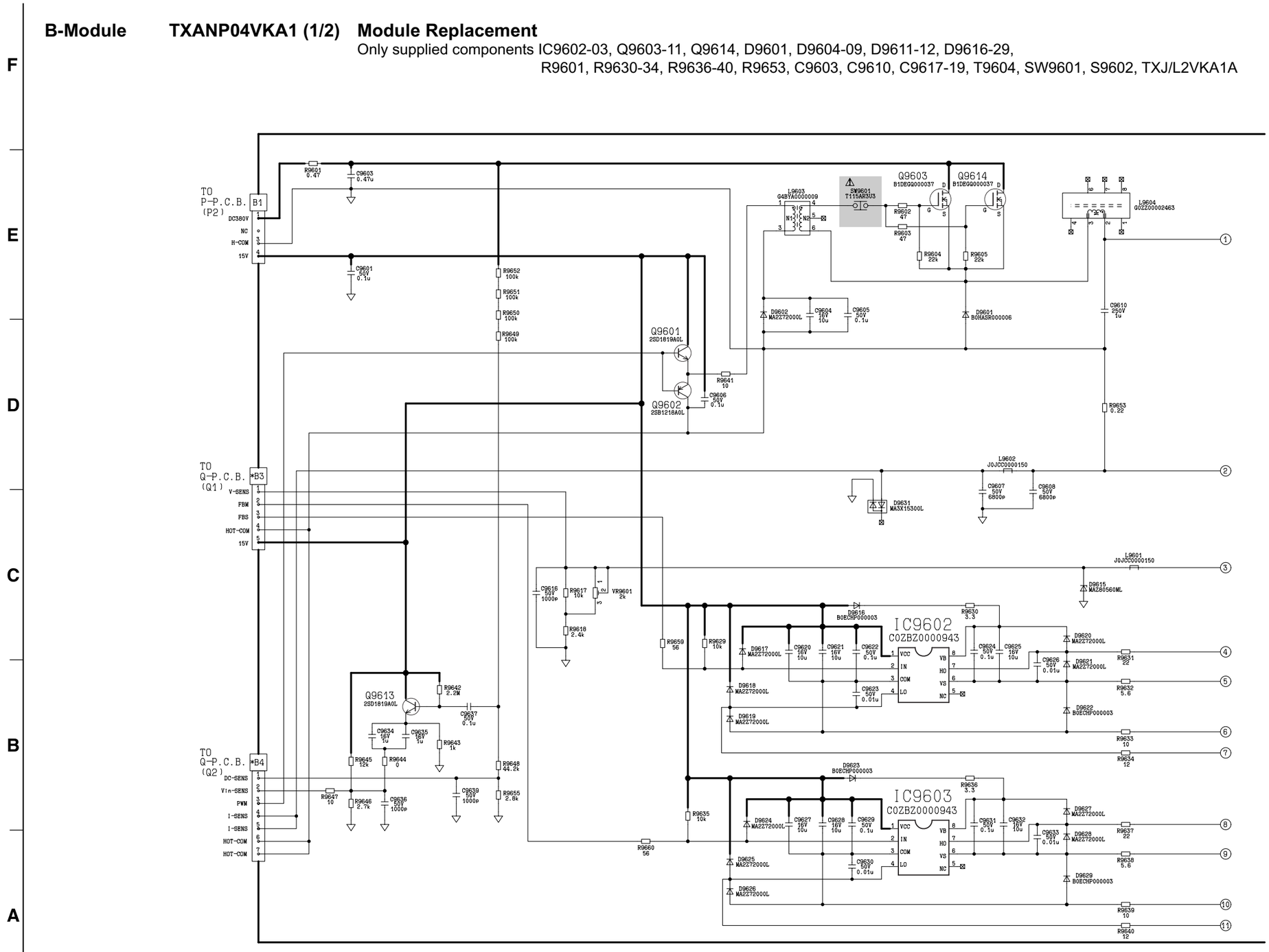
WL-P.C.Board (3/3) TNPA3876 (PT-LB60NTU/E/EA, LB55NTE/EA)



12.8. B-Module (1/2)

B-Module **TXANP04VKA1 (1/2)** **Module Replacement**

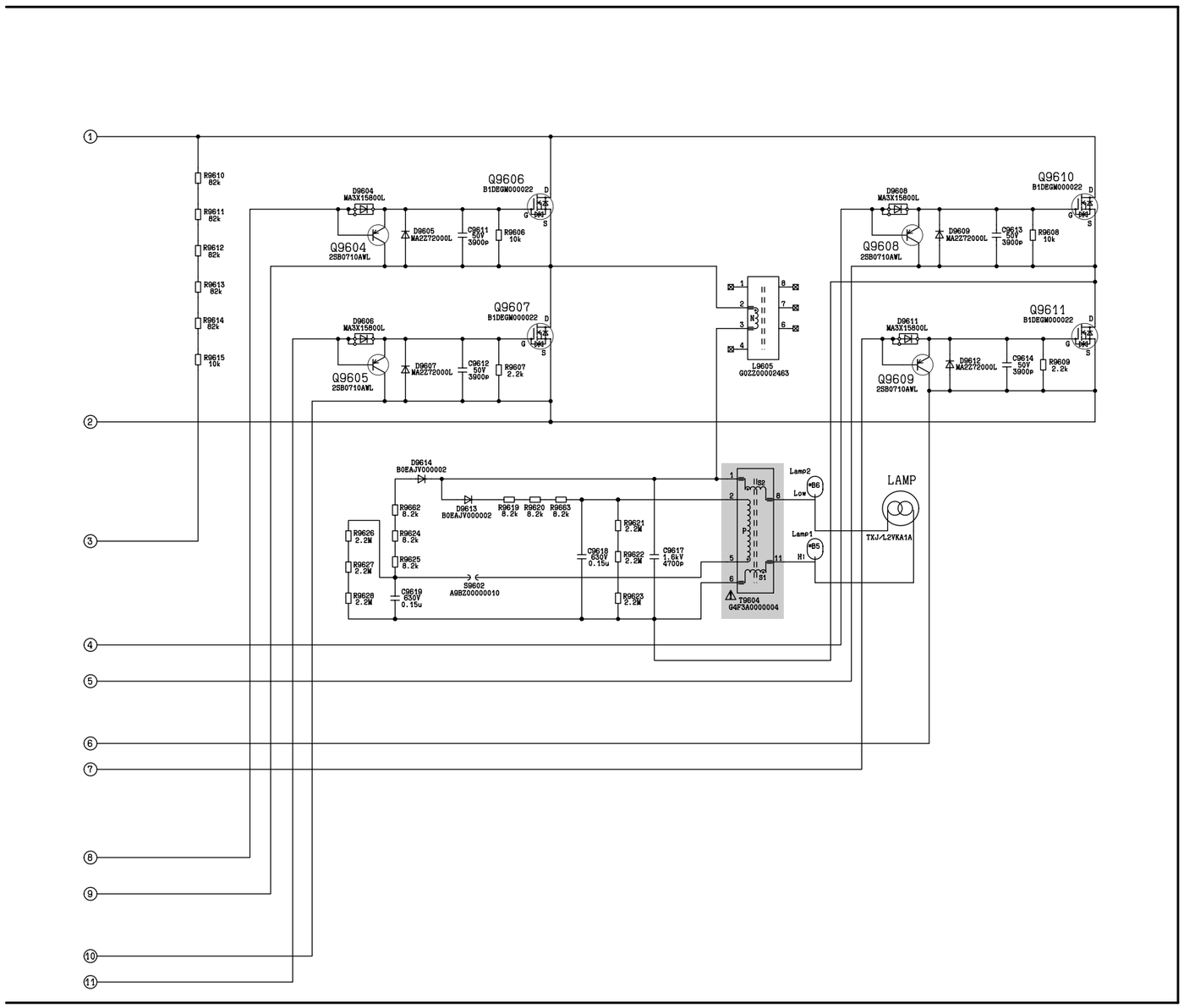
Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VKA1A



12.9. B-Module (2/2)

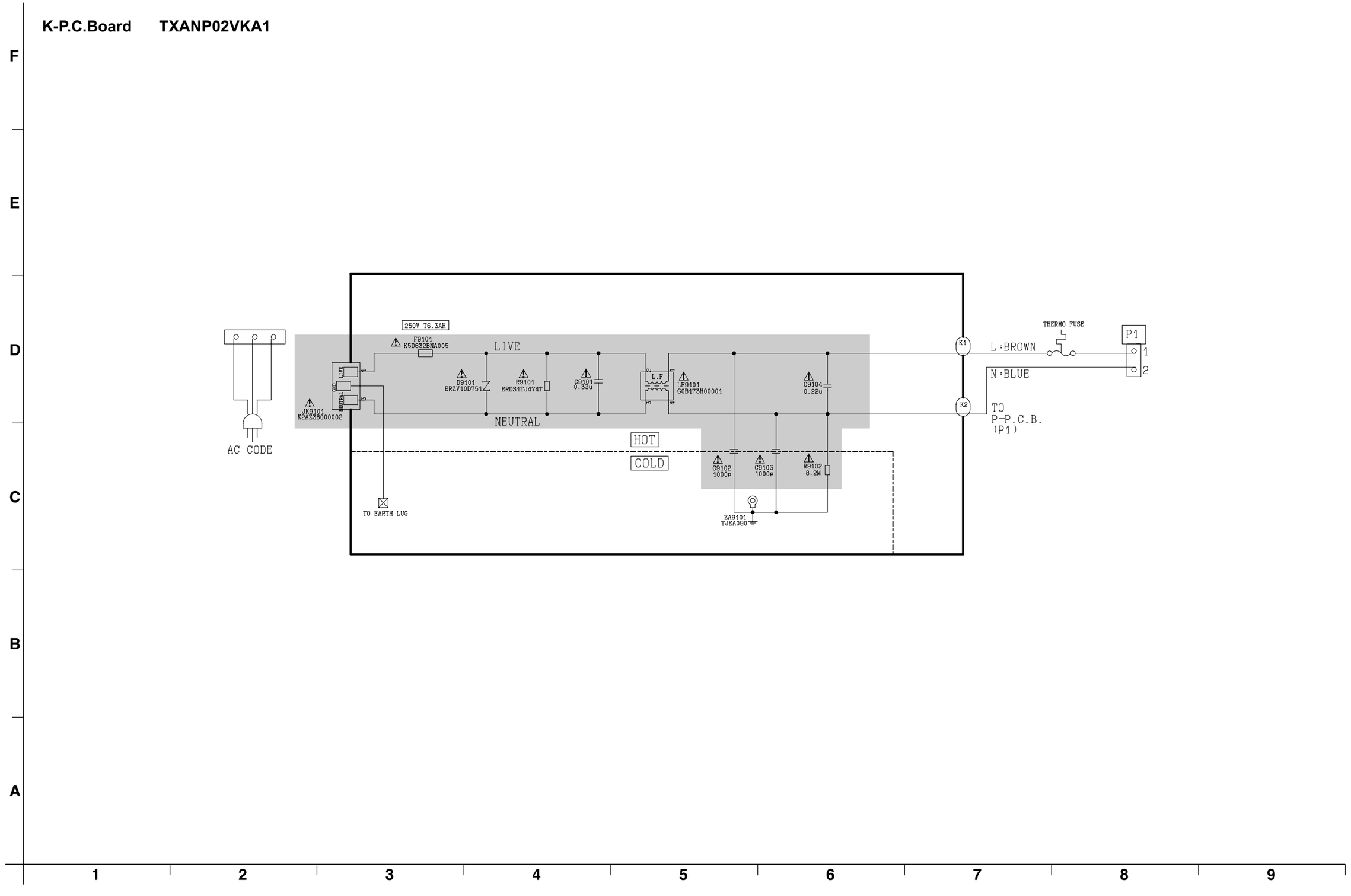
B-Module **TXANP04VKA1 (2/2)** **Module Replacement**

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VKA1A



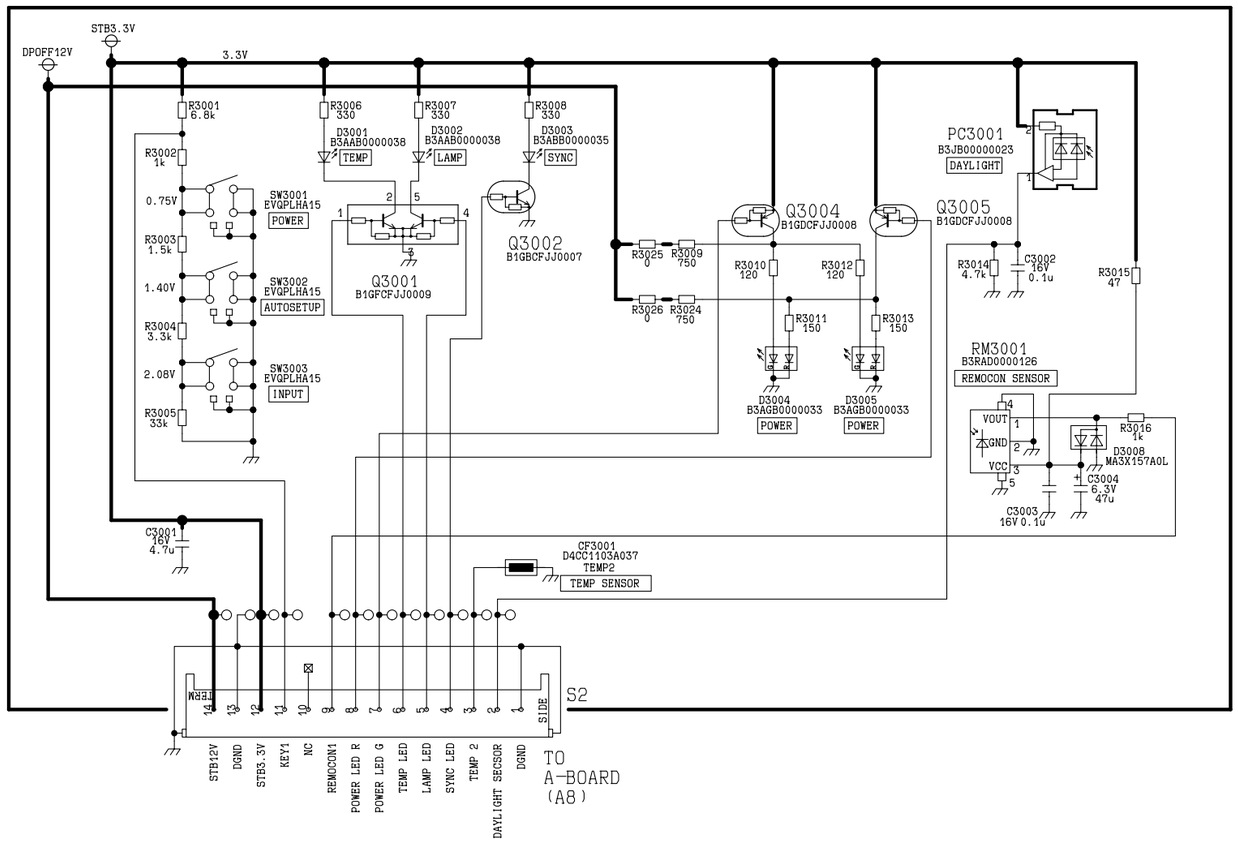
12.10. K-P.C.Board

K-P.C.Board TXANP02VKA1

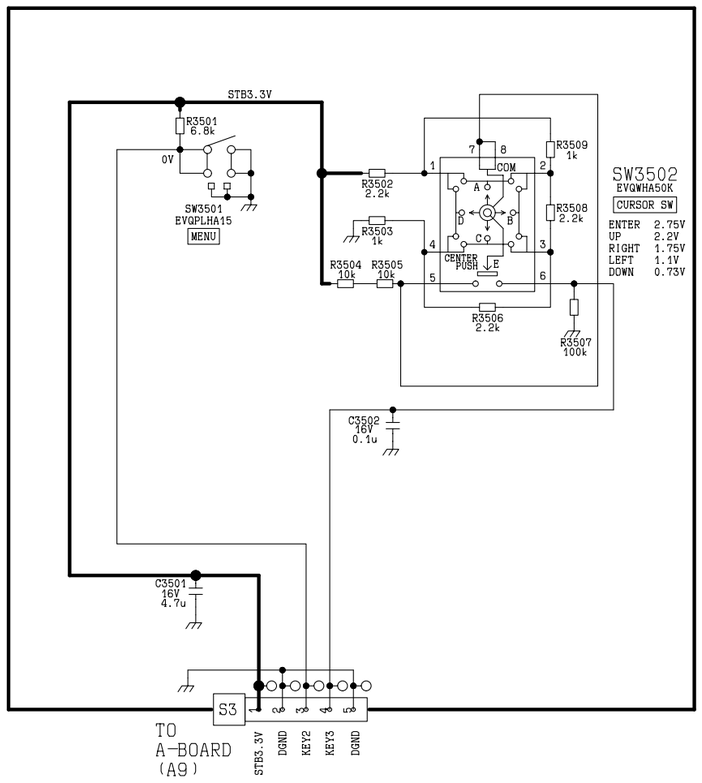


12.11. S1-P.C.Board, S2-P.C.Board

S1-P.C.Board TNPA3879

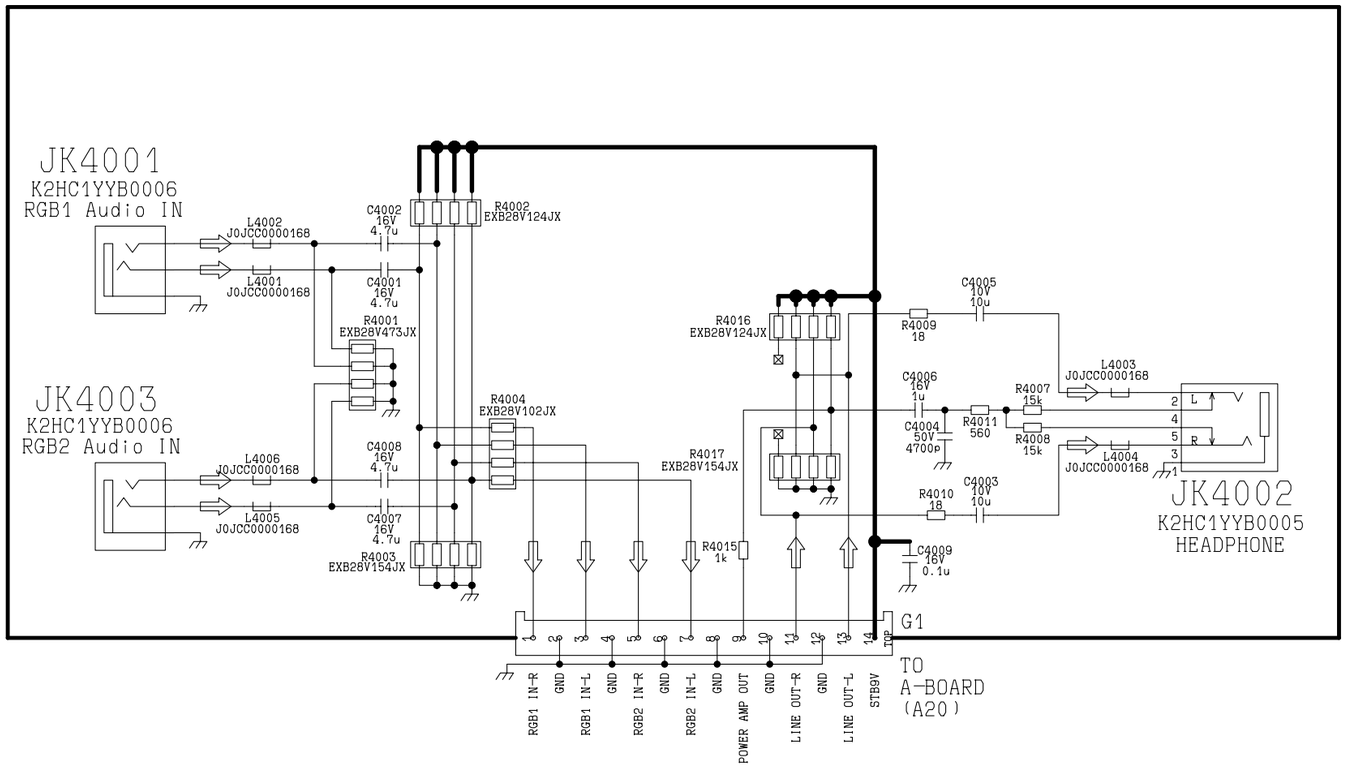


S2-P.C.Board TNPA3880

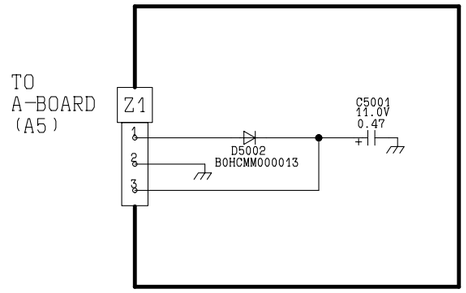


12.12. G-P.C.Board, Z-P.C.Board

G-P.C.Board TNPA3881



Z-P.C.Board TNPA3913



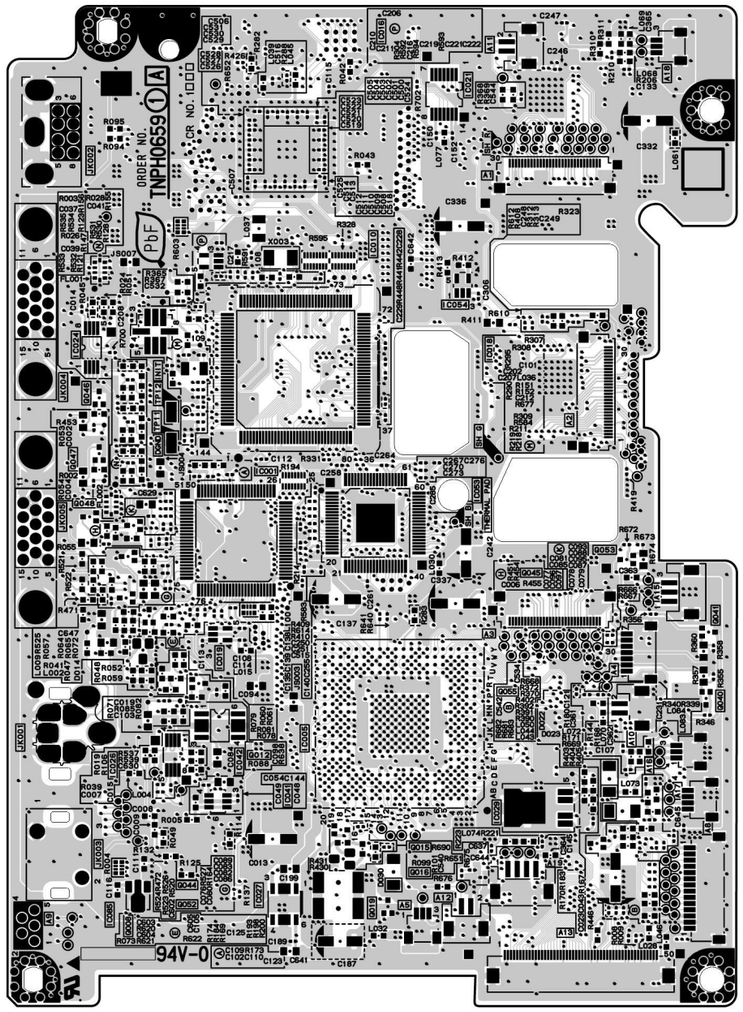
13 Circuit Boards

13.1. A-P.C.Board

A-P.C.Board (Foil Side) **TXANP01VKB7 (PT-LB60NTU/E/EA, LB55NTE/EA)**
TXANP01QBYZ (PT-LB60U/EA, LB55EA)

A-P.C.Board (Foil Side)							
IC				TRANSISTOR			
IC1001	C-2	IC1026	B-1	Q1008	A-1	Q1045	B-3
IC1005	B-2	IC1027	A-2	Q1012	B-2	Q1046	C-1
IC1010	C-2	IC1029	A-3	Q1015	A-2	Q1047	C-1
IC1016	D-3	IC1041	A-2	Q1016	A-2	Q1048	C-1
IC1018	C-3	IC1042	B-2	Q1019	A-2	Q1052	A-1
IC1019	B-1	IC1053	C-2	Q1040	B-3	Q1053	B-3
IC1021	D-2	IC1054	C-2	Q1041	B-3	Q1055	B-3
IC1024	C-1	IC1085	A-1	Q1044	A-1		

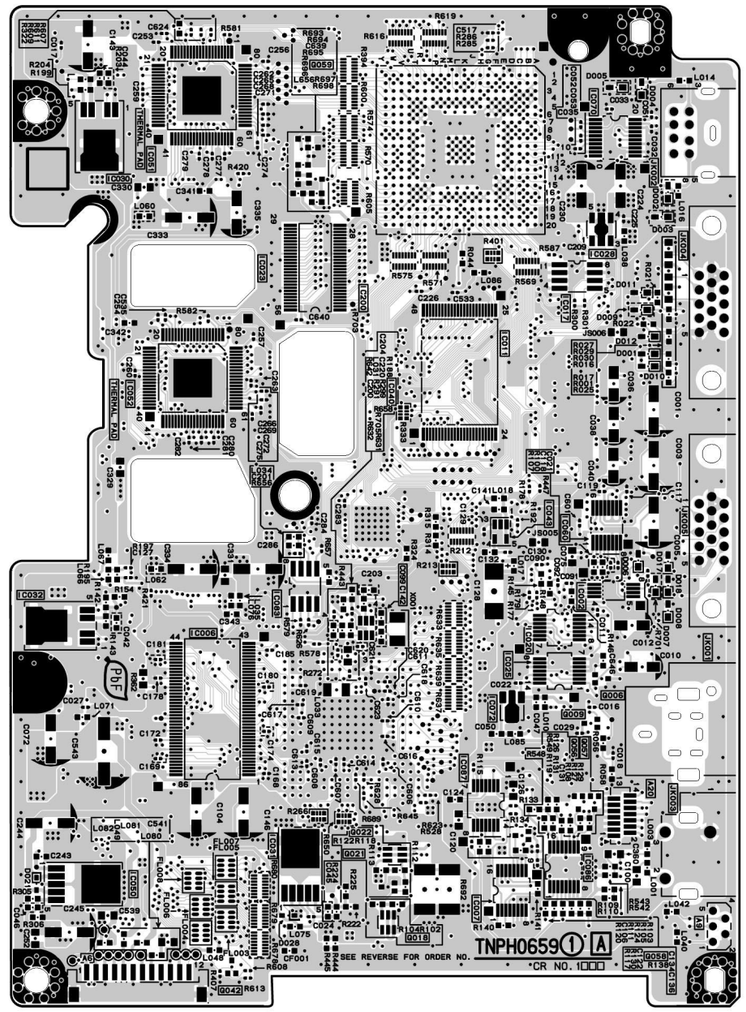
ADDRESS INFORMATION



A-P.C.Board (Component Side) **TXANP01VKB7 (PT-LB60NTU/E/EA, LB55NTE/EA)**
TXANP01QBYZ (PT-LB60U/EA, LB55EA)

A-P.C.Board (Component Side)					
IC				TRANSISTOR	
IC1002	B-8	IC1040	C-7	Q1006	B-8
IC1006	B-6	IC1043	C-8	Q1009	B-8
IC1007	A-7	IC1050	A-6	Q1018	A-7
IC1011	C-7	IC1051	D-6	Q1021	A-7
IC1017	D-8	IC1052	C-6	Q1022	A-7
IC1020	B-8	IC1060	C-8	Q1042	A-6
IC1023	D-7	IC1070	D-8	Q1056	B-8
IC1025	B-8	IC1072	B-7	Q1057	B-8
IC1028	D-8	IC1083	B-7	Q1058	A-8
IC1030	D-6	IC1086	A-8	Q1059	D-7
IC1031	A-7	IC1087	A-7		
IC1032	B-6	IC1200	D-7		

ADDRESS INFORMATION



13.2. WL-P.C.Board, S1-P.C.Board

WL-P.C.Board (Foil Side) TNPA3876 (PT-LB60NT**/LB55NT** only)

WL-P.C.Board (Foil Side)	
IC	
IC1802	D-1
IC1805	C-2
IC1806	C-1
IC1807	C-1
IC1809	B-1

ADDRESS INFORMATION

WL-P.C.Board (Component Side) TNPA3876 (PT-LB60NT**/LB55NT** only)

WL-P.C.Board (Component Side)	
IC	
IC1803	C-4
IC1804	C-4
IC1808	B-4

ADDRESS INFORMATION

S1-P.C.Board (Foil Side) TNPA3879

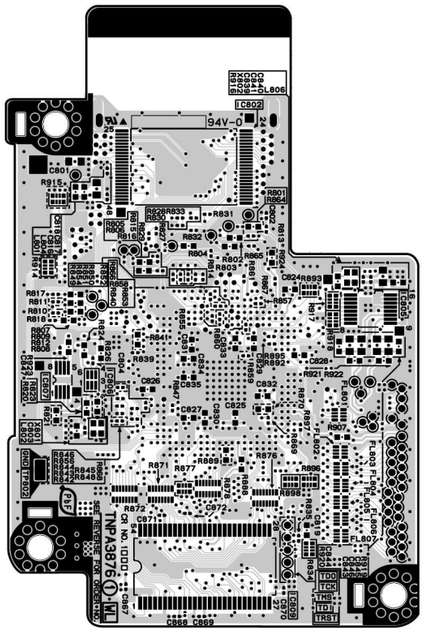
S1-P.C.Board (Foil Side)	
TR	
Q3002	B-7
Q3004	C-6
Q3005	C-6

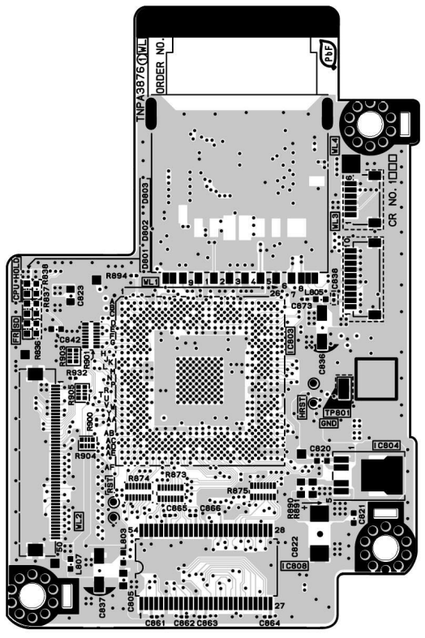
ADDRESS INFORMATION

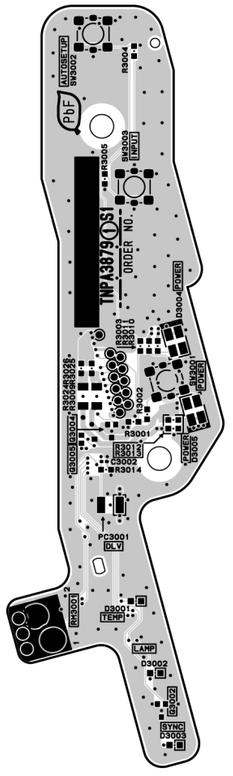
S1-P.C.Board (Component Side) TNPA3879

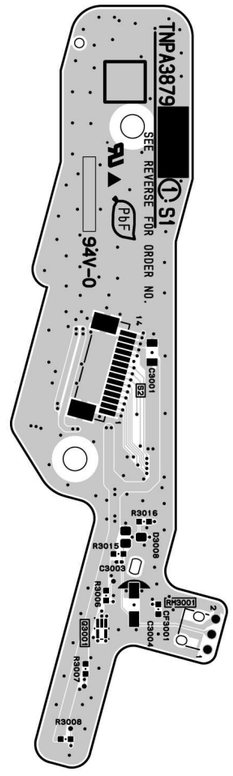
S1-P.C.Board (Component Side)	
TR	
Q3001	B-8

ADDRESS INFORMATION

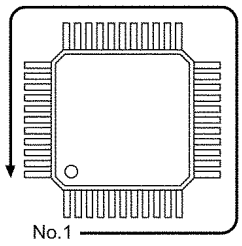




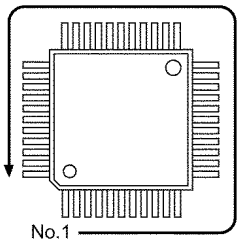




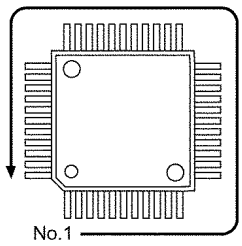
14 Terminal guide of ICs and transistors



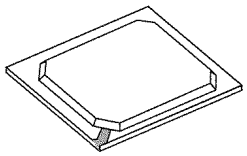
C1AB00002033 80 Pin



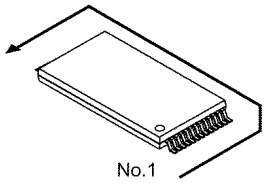
C1AB00002456 100 Pin



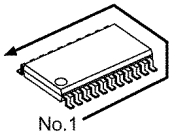
C2DBYH000024 144 Pin



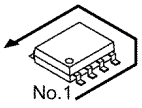
C1AB00002421



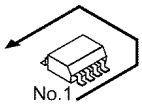
TVRN741 48 Pin



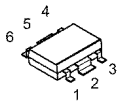
C0ZBZ0001361	20 Pin
C0ABZA000055	16 Pin
C0JBAZ001876	14 Pin
C3ABPJ000071	86 Pin
C1AB00002428	14 Pin
C0JBAR000370	16 Pin
C0JBAR000367	16 Pin



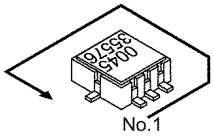
C3EBCC000052	8 Pin
C1AB00002548	8 Pin
C0FBBD000213	8 Pin
C0JBAZ002431	8 Pin



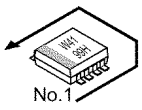
C3EBJC000055 8 Pin



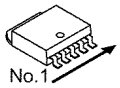
C0DBZGF00002 6 Pin



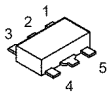
C1GB00000102 8 Pin



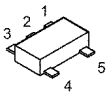
C0JBAZ002743 8 Pin



C0CBCYG00004	5 Pin
C0DBZYY00225	5 Pin
C0DBEKG00004	



C0CBCAD00039 5 Pin



C0DBEMC00020	5 Pin
C0DBZHD00013	5 Pin

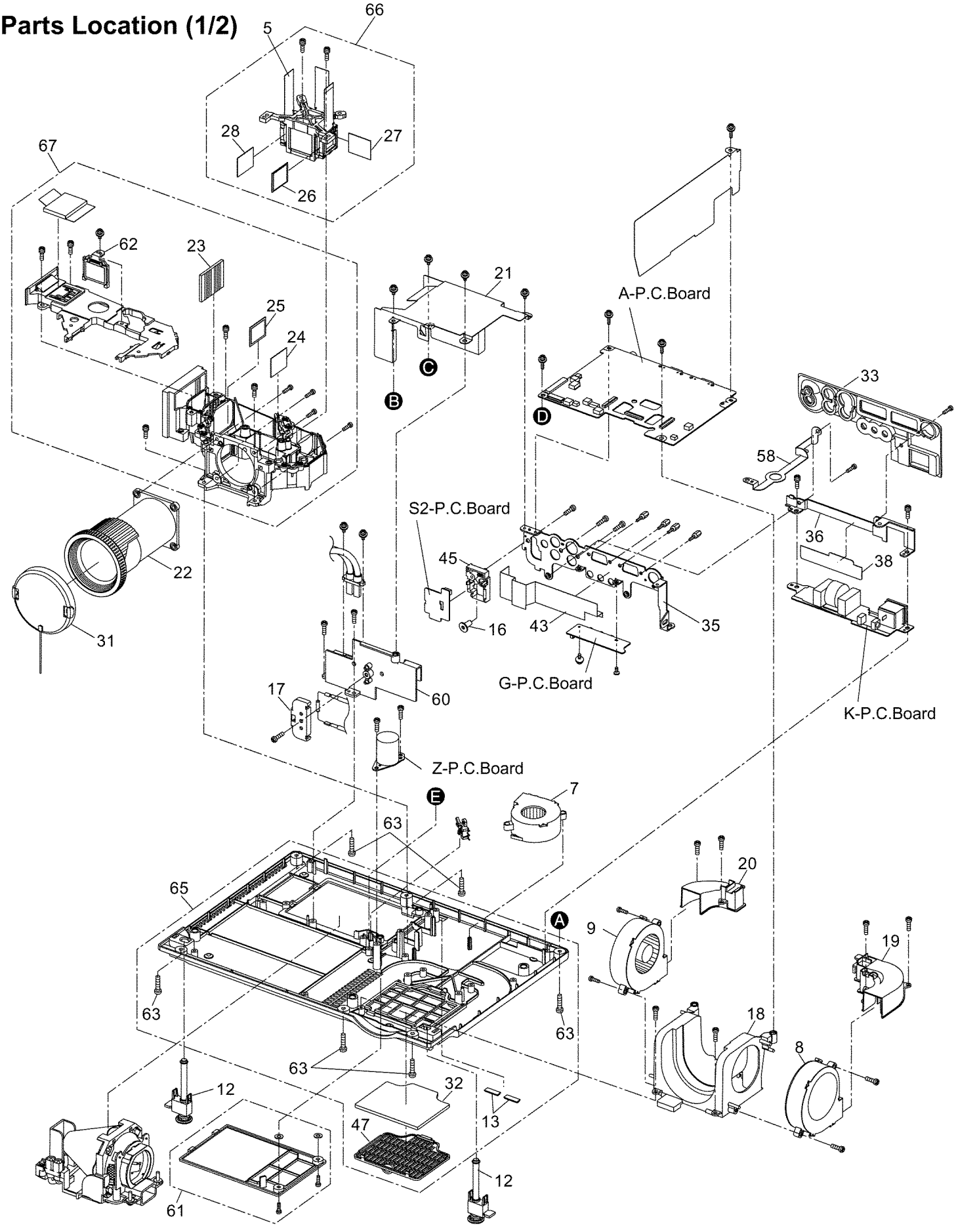
C0CBAHC00010	3 Pin
C0CBADC00075	3 Pin

B1ABDF000018	3 Pin
B1GBCFLL0039	3 Pin
B1GBCFLM0003	3 Pin

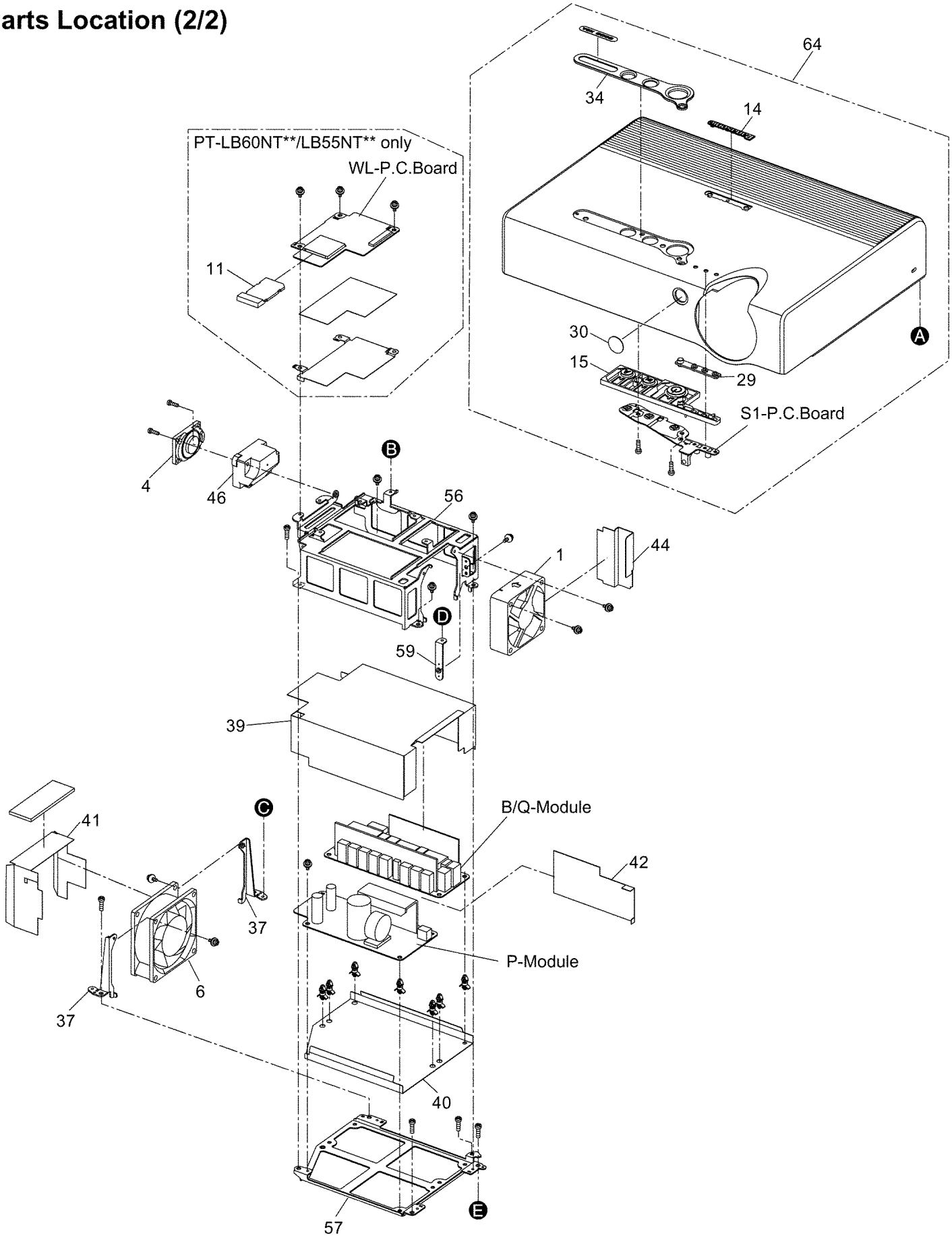
B1CHQD000001 6 Pin

15 Exploded Views

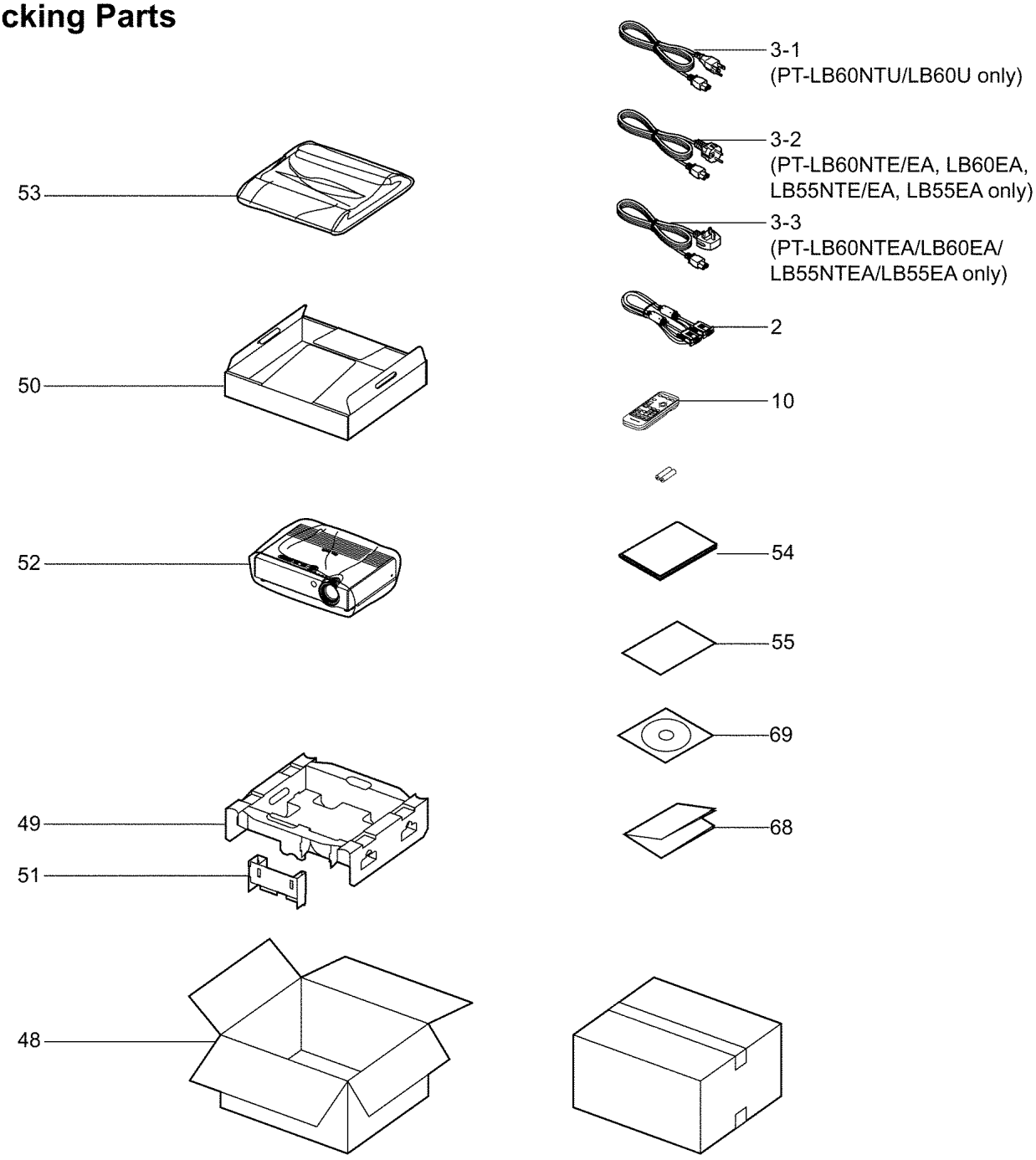
Parts Location (1/2)



Parts Location (2/2)



Packing Parts



16 Replacement Parts List

Important Safety Notice

Components identified by the International symbol ⚠ have special characteristics important for safety.
When replacing any of these components, use only the manufacturer's specified parts.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Carbon	F : ± 1 %
F : Fuse	G : ± 2 %
M : Metal Oxide	J : ± 5 %
Metal Film	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

2. Capacitor

Example:

ECKF1H103ZF C 0.01PF, Z, 50V

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic	C : ±0.25 pF
E : Electrolytic	D : ±0.5 pF
P : Polyester	F : ± 1 pF
PP : Polypropylene	J : ± 5 %
S : Polystyrol	K : ±10 %
T : Tantalum	L : ±15 %
	M : ±20 %
	P : +100 %, -0 %
	Z : +80 %, -20 %

Notes:

Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
	[MECHANICAL PARTS]		
	D4CDY4930003	TEMP SENSOR	LB60NTU/E/EA, LB55NTE/EA
	D4CDY5030001	TEMP SENSOR	LB60U/EA, LB55EA
1	FB60DN4WB506	POWER FAN	⚠
	J0KA00000033	CORE	
	J0KG00000036	CORE	⚠
2	K1HA15DA0002	VGA CABLE	
3-1	K2CG3DR00006	POWER CORD	⚠ LB60NTU, LB60U
3-2	K2CM3DR00002	POWER CORD(EUROPE)	⚠ LB60NTE/EA, LB60EA, LB55NTE/EA, LB55EA
3-3	K2CT3DR00005	POWER CORD (UK)	⚠ LB60NTEA, LB60EA, LB55NTEA, LB55EA
4	L0AA04C00011	SPEAKER	
5	TZTEN01VKA1	LIQUID CRYSTAL DISPLAY(B) (L5BDAXQ00226)	LB60NTU/E/EA, LB60U/EA
	TZTEN01VKC3	LIQUID CRYSTAL DISPLAY(B) (L5BDAYY00016)	LB55NTE/EA, LB55EA
6	L6FAYYYH0021	VENTILATION FAN	⚠
7	L6FCJDAH0001	PBS FAN	⚠
8	L6FCLDCH0002	SIROCCO FAN	⚠
9	L6FCLDCH0003	SIROCCO FAN	⚠
10	N2QAYA000001	REMOTE CONTROLLER	LB60NTU/E/EA, LB55NTE/EA
	N2QAYA000002	REMOTE CONTROLLER	LB60U/EA, LB55EA
11	N5HZZ0000042	LAN MODULE (SDIO)	⚠ LB60NTU/E/EA, LB55NTE/EA
12	TBLB0049	ADJUST LEG	
13	TBLG3076	RUBBER LEG (REAR)	
	TBMA166	WIRELESS LOGO BADGE	LB60NTU/E/EA, LB55NTE/EA
14	TBMA190	PANASONIC BADGE	

Ref. No.	Part No.	Part Name & Description	Remarks
	TBMA194	MODEL NAME LOGO BADGE	LB60U/EA
	TBMA195	MODEL NAME LOGO BADGE	LB55EA
	TBMG216	MODEL NAME PLATE	LB60NTU
	TBMG217	MODEL NAME PLATE	LB60NTE
	TBMG218	MODEL NAME PLATE	LB60NTEA
	TBMG219	MODEL NAME PLATE	LB60U
	TBMG221	MODEL NAME PLATE	LB60EA
	TBMG223	MODEL NAME PLATE	LB55NTE
	TBMG224	MODEL NAME PLATE	LB55NTEA
	TBMG225	MODEL NAME PLATE	LB55EA
	TBMG226	MODEL NO. LABEL	LB60NTU
	TBMG227	MODEL NO. LABEL	LB60NTE
	TBMG228	MODEL NO. LABEL	LB60NTEA
	TBMG229	MODEL NO. LABEL	LB60U
	TBMG231	MODEL NO. LABEL	LB60EA
	TBMG232	MODEL NO. LABEL	LB55NTE
	TBMG233	MODEL NO. LABEL	LB55NTEA
	TBMG234	MODEL NO. LABEL	LB55EA
15	TBXA38203	CONTROL BUTTON	
16	TBXA38301-1	CURSOR BUTTON	
17	TEEC5120	TEMP FUSE METAL	
18	TEEC5190	DUCT1	
19	TEEC5191	DUCT2	LB60NTU/E/EA, LB60U/EA
	TEEC5239	DUCT2	LB55NTE/EA, LB55EA
20	TEEC5192	DUCT3	
21	TENC5312	LAMP HOUSE	
	THEC084N	D-SUB SCREW	
22	TKGF0120	LENS	
23	TKGP5264	PBS	LB60NTU/E/EA, LB60U/EA
	TKGP5303	PBS	LB55NTE/EA, LB55EA
24	TKGP5265	POLARIZING PLATE/IN(R)	
25	TKGP5267	POLARIZING PLATE/IN(B)	
26	TKGP5268	POLARIZING PLATE/OUT(R)	LB60NTU/E/EA, LB60U/EA
	TKGP5226	POLARIZING PLATE/OUT(R)	LB55NTE/EA, LB55EA

Ref. No.	Part No.	Part Name & Description	Remarks
27	TKGP5269	POLARIZING PLATE/OUT(G)	LB60NTU/E/EA, LB60U/EA
	TKGP0034	POLARIZING PLATE/OUT(G)	LB55NTE/EA, LB55EA
28	TKGP5270	POLARIZING PLATE/OUT(B)	LB60NTU/E/EA, LB60U/EA
	TKGP5228-1	POLARIZING PLATE/OUT(B)	LB55NTE/EA, LB55EA
29	TKKC5167	LED PLATE	
30	TKKC5199	REMOTE CONTROL RECEIVER	
31	TKKL5332	LENS COVER	
32	TKNE057	FILTER1	
33	TKPA95702	TERMINAL COVER	
34	TKPA95802	BUTTON DECORATION BOARD	
35	TKZF5038-1	TERMINAL METAL	
36	TKZF5039	AC INLET METAL	
37	TKZJ5061	VENTILATION FAN METAL	
	TMKG389	FAN SPONGE	
	TMKG422	SPACER	
	TMKG580	VENTILATION FAN CEILING	
	TMKG590	SPONGE(BALLAST)	
	TMKX100	WASHER	
	TMKX511-1	INSULATION SHEET(DUCT)	
	TMKX745	TAPE 1 (UPPER COVER)	
	TMKX746	TAPE 2 (UPPER COVER)	
38	TMKX877	INSULATION SHEET (K-PCB)	
39	TMKX878	POWER INSULATION SHEET	
40	TMKX879	POWER INSULATION SHEET	
41	TMKX880-1	VENTILATION FAN COVER	
42	TMKX881	POWER INSULATION SHEET	
43	TMKX882	SHIELD(A-PCB)	
	TMKX883	TAPE(DECORATION BOARD)	
44	TMKX917	POWER FAN COVER	
	TMKX929	POWER VENTILATION SHEET	
	TMKX930	LEAD WIRE COVER	
	TMKY061	INSULATION SHEET (WL)	LB60NTU/E/EA, LB55NTE/EA
	TMKY064	SENSOR INSTALL METAL	LB60NTU/E/EA, LB55NTE/EA
	TMME180	SPACER(PCB)	
	TMME275	MINI SADDLE	LB60NTU/E/EA, LB55NTE/EA
45	TMXE034-2	HOLDER(S-PCB)	
46	TMZK5022	SPEAKER BOX	
47	TMZX5053	FILTER INSTALL METAL	
48	TPCB97302	CARTON	LB60NTU
	TPCB97303	CARTON	LB60NTE
	TPCB97304	CARTON	LB60NTEA
	TPCB97305	CARTON	LB60U
	TPCB97307	CARTON	LB60EA
	TPCB97309	CARTON	LB55NTE
	TPCB97310	CARTON	LB50NTEA
	TPCB97311	CARTON	LB55EA
49	TPDF1465	CUSHION	
50	TPDF1466	ACCESSORY CARTON	
51	TPDF1510	CUSHION 2	
52	TPEH124-1	SET COVER	
53	TPEP019	CARRING CASE	
	TQB817002-1	SAFETY SHEET	LB60NTU, LB60U
55	TQBH7017	SHEET (PASSWORD)	
54	TQBJ0193	INSTRUCTION BOOK	⚠ LB60NTU, LB60U
	TQBJ0195	INSTRUCTION BOOK	⚠ LB60NTE, LB55NTE
	TQBJ0197	INSTRUCTION BOOK	⚠ LB60NTEA, LB60EA, LB55NTEA, LB55EA
	TQBJ7008	HIGH GROUND SHEET	LB60NTU, LB60U
	TQD1712010	SHEET	

Ref. No.	Part No.	Part Name & Description	Remarks
	TQDJ18004-1	GUARANTEE CARD (CANADA)	LB60NTU, LB60U
	TQDJ18028	GUARANTEE CARD (USA)	LB60NTU, LB60U
68	TQDJ19029-1	INSTALL GUIDE(UK/SPAIN)	LB60NTU
	TQDJ19030-1	INSTALL GUIDE(GERMAN/ITALY)	LB60NTE, LB55NTE
	TQDJ19031-1	INSTALL GUIDE (FRANCE/SPAIN)	LB60NTE, LB55NTE
	TQDJ19032-1	INSTALL GUIDE(UK/KOREA)	LB60NTE/EA, LB55NTE/EA
	TQF86202	LABEL	
	TSXL541	FLEX CABLE (G-PCB)	⚠
	TSXL560	FLEX CABLE	⚠
	TSXL561	FLEX CABLE(WL)	⚠ LB60NTU/E/EA, LB55NTE/EA
	TUCB5037	ALUMINUM SHEET 1	
	TUCB5039	ALUMINUM SHEET 1	
56	TUCC6056-1	POWER BOX	
57	TUCC6057	POWER BASE	
58	TUCX5202	EARTH METAL	
59	TUCX5218	EARTH METAL(A-PCB)	
60	TXFEE02VKA1	SOCKET HOLDER ASSY	
61	TXFKL01VKA1	LAMP COVER ASSY	
69	TXFQH01VKB9C	CD-ROM	LB60NTU/E/EA, LB55NTE/EA
	TXJ/B1VJW5A	LEAD WIRE (BALLAST UNIT)	⚠
	TXJ/K1VKA1A	LEAD WIRE(K-PCB)	⚠
	TXJ/L2VKA1A	LAMP CONNECTOR	
	TXJ/P1VKA1	LEAD WIRE	⚠
	TXJ/P3VKB7	LEAD WIRE	⚠
	TXJ/Q3VKA1A	LEAD WIRE	⚠
	TXJ/Z1VKB9	LEAD WIRE	⚠
62	TXZKG02VKB7	POLARIZING PLATE/IN(G)	
	XSB3+8FN	SCREW	
63	XTBT969FJK	SCREW	
	XTN3+6GFJ	SCREW	
	XTV3+12GFJ	SCREW(DUCT ASSY)	
	XTW3+8PFJ	SCREW	
	XYN2+F6FJ	SCREW	
	XYN26+F6FJ	SCREW	
	XYN3+F20FJK	SCREW	
	XYN3+F25FJ	SCREW	
	XYN3+F8FJ	SCREW	
	XYN3+F8FJK	SCREW	
	XYN3+J10FJ	SCREW	
	XYN3+J6FJK	SCREW	LB60NTU/E/EA, LB55NTE/EA
	XYN3+J8FJ	SCREW	
	XYN4+E8FJ	SCREW	
	XZBT6532	POLY BAG	LB60NTU, LB60U
64	TXFKF99QBVZ	UPPER COVER	LB60NTU
	TXFKF99QBWZ	UPPER COVER	LB60NTE
	TXFKF99QBXZ	UPPER COVER	LB60NTEA
	TXFKF99QBYZ	UPPER COVER	LB60U
	TXFKF99QCAZ	UPPER COVER	LB60EA
	TXFKF99QCRZ	UPPER COVER	LB55NTE
	TXFKF99QCSZ	UPPER COVER	LB55NTEA
	TXFKF99QDFZ	UPPER COVER	LB55EA
65	TXFKF98QBVZ	BOTTOM COVER	LB60NTU
	TXFKF98QBWZ	BOTTOM COVER	LB60NTE
	TXFKF98QBXZ	BOTTOM COVER	LB60NTEA
	TXFKF98QBYZ	BOTTOM COVER	LB60U
	TXFKF98QCAZ	BOTTOM COVER	LB60EA
	TXFKF98QCRZ	BOTTOM COVER	LB55NTE
	TXFKF98QCSZ	BOTTOM COVER	LB55NTEA
	TXFKF98QDFZ	BOTTOM COVER	LB55EA
67	TXFEC98VKB7	ANALYSIS BLOCK	LB60NTU/E/EA, LB60U/EA
	TXFEC98VKC3	ANALYSIS BLOCK	LB55NTE/EA, LB55EA

Ref. No.	Part No.	Part Name & Description	Remarks
66	TXFEC99VKA1	OPTICAL BLOCK	LB60NTU/E/EA, LB60U/EA
	TXFEC99VKC3	OPTICAL BLOCK	LB55NTE/EA, LB55EA
[INTEGRATED CIRCUIT]			
IC1001	C1AB00002456	I.C	
IC1002	C3EBCC000052	I.C	
IC1005	C1AB00002421	I.C	
IC1006	C3ABPJ000071	I.C	
IC1007	C0JBAR000370	I.C	
IC1010	C2DBYH000024	I.C	
IC1011	TVRN741-2	I.C	
IC1016	C0EBY0000022	I.C	
IC1017	C3EBJC000055	I.C	
IC1018	C1GB00000102	I.C	
IC1019	C0CBCAC00096	I.C	
IC1020	C0JBAZ001876	I.C	
IC1021	C0FBBD000213	I.C	
IC1023	C0JBAZ001992	I.C	
IC1024	C3EBCC000052	I.C	
IC1025	C0JBAZ002743	I.C	
IC1026	C1AB00002548	I.C	
IC1027	C0DBZYY00225	I.C	
IC1028	C0CBCAD00039	I.C	
IC1029	C0CBCYG00004	I.C	
IC1030	C0CBCYG00004	I.C	
IC1031	C0DBEKG00004	I.C	
IC1032	C0CBCYG00004	I.C	
IC1040	C0ZBZ0001385	I.C	
IC1041	C0DBZHD00013	I.C	
IC1042	C0DBZGF00002	I.C	
IC1043	C0CBCAD00015	I.C	
IC1050	C0DBEKG00004	I.C	
IC1051	C1AB00002033	I.C	
IC1052	C1AB00002033	I.C	
IC1053	C1AB00002033	I.C	
IC1054	C0DBEMC00020	I.C	
IC1060	C0ABZA000055	I.C	
IC1070	C0ZBZ0001361	I.C	
IC1072	C0CBADC00075	I.C	
IC1083	C0JBAZ002431	I.C	
IC1085	C0CBAHC00010	I.C	
IC1086	C0JBAR000367	I.C	
IC1087	C1AB00002428	I.C	
IC1200	C1AB00001945	I.C	
IC1802	TVRN743-1	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1803	C2GBC0000205	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1804	C0DBEFG00003	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1805	C0FBBK000051	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1806	C0JBAZ002347	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1807	C0JBAF000540	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1808	C3ABQG000083	I.C	LB60NTU/E/EA, LB55NTE/EA
IC1809	C3ABQG000083	I.C	LB60NTU/E/EA, LB55NTE/EA
IC9602	C0ZBZ0000943	I.C	
IC9603	C0ZBZ0000943	I.C	
[TRANSISTORS]			
Q1006	B1ABDF000018	TRANSISTOR	
Q1008	B1ABDF000018	TRANSISTOR	
Q1009	B1ABDF000018	TRANSISTOR	
Q1012	B1ABDF000018	TRANSISTOR	
Q1015	B1GBCFLM0003	TRANSISTOR	
Q1016	2SB0710AWL	TRANSISTOR	
Q1018	B1DFED000017	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q1019	B1GBCFLM0003	TRANSISTOR	
Q1021	B1GBCFLL0039	TRANSISTOR	
Q1022	B1CHQD000001	TRANSISTOR	
Q1040	B1ABDF000018	TRANSISTOR	
Q1041	B1ABDF000018	TRANSISTOR	
Q1042	B1ABDF000018	TRANSISTOR	
Q1044	B1GBCFJJ0007	TRANSISTOR	
Q1045	B1ADCE000013	TRANSISTOR	
Q1046	B1ABDF000018	TRANSISTOR	
Q1047	B1ABDF000018	TRANSISTOR	
Q1048	B1ABDF000018	TRANSISTOR	
Q1052	B1GDCFJJ0008	TRANSISTOR	
Q1053	B1ABDF000018	TRANSISTOR	
Q1055	B1GDCFJJ0008	TRANSISTOR	
Q1056	B1GBCFLM0003	TRANSISTOR	
Q1057	B1GBCFLM0003	TRANSISTOR	
Q1058	B1GBCFLM0003	TRANSISTOR	
Q1059	B1ABDF000018	TRANSISTOR	
Q3001	B1GFCFJJ0009	TRANSISTOR	
Q3002	B1GBCFJJ0007	TRANSISTOR	
Q3004	B1GDCFJJ0008	TRANSISTOR	
Q3005	B1GDCFJJ0008	TRANSISTOR	
Q9603	B1DEGQ000037	TRANSISTOR	
Q9604	2SB0710AWL	TRANSISTOR	
Q9605	2SB0710AWL	TRANSISTOR	
Q9606	B1DEGM000022	TRANSISTOR	
Q9607	B1DEGM000022	TRANSISTOR	
Q9608	2SB0710AWL	TRANSISTOR	
Q9609	2SB0710AWL	TRANSISTOR	
Q9610	B1DEGM000022	TRANSISTOR	
Q9611	B1DEGM000022	TRANSISTOR	
Q9614	B1DEGQ000037	TRANSISTOR	
[DIODES]			
D1001	MA8056M	DIODE	
D1006	MA8056M	DIODE	
D1008	MA8056M	DIODE	
D1010	MA8056M	DIODE	
D1011	MA8056M	DIODE	
D1012	MA8056M	DIODE	
D1017	MA8056M	DIODE	
D1018	MA8056M	DIODE	
D1021	MA2S11100L	DIODE	
D1022	B0JCPD000026	DIODE	
D1023	B0JCPD000026	DIODE	
D1028	MA2S11100L	DIODE	
D1030	B0BC01000033	DIODE	
D3001	B3AAB0000038	DIODE	
D3002	B3AAB0000038	DIODE	
D3003	B3ABB0000035	DIODE	
D3004	B3AGB0000033	DIODE	
D3005	B3AGB0000033	DIODE	
D3008	MA157A	DIODE	
D5002	B0HCMM000013	DIODE	
D9101	ERZV10D751	DIODE	⚠
D9601	B0HASR000006	DIODE	
D9604	MA158TX	DIODE	
D9605	MA2Z72000L	DIODE	
D9606	MA158TX	DIODE	
D9607	MA2Z72000L	DIODE	
D9608	MA158TX	DIODE	
D9609	MA2Z72000L	DIODE	
D9611	MA158TX	DIODE	
D9612	MA2Z72000L	DIODE	
D9616	B0ECHP000003	DIODE	
D9617	MA2Z72000L	DIODE	
D9618	MA2Z72000L	DIODE	
D9619	MA2Z72000L	DIODE	
D9620	MA2Z72000L	DIODE	
D9621	MA2Z72000L	DIODE	
D9622	B0ECHP000003	DIODE	
D9623	B0ECHP000003	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D9624	MA2Z72000L	DIODE	
D9625	MA2Z72000L	DIODE	
D9626	MA2Z72000L	DIODE	
D9627	MA2Z72000L	DIODE	
D9628	MA2Z72000L	DIODE	
D9629	B0ECHP000003	DIODE	
		[COILS]	
L1001	J0JCC0000168	FILTER	
L1002	J0JCC0000168	FILTER	
L1003	J0JCC0000168	FILTER	
L1004	J0JCC0000168	FILTER	
L1009	J0JCC0000168	FILTER	
L1010	J0JCC0000168	FILTER	
L1014	J0JCC0000168	FILTER	
L1015	J0JCC0000168	FILTER	
L1016	J0JCC0000168	FILTER	
L1017	J0JCC0000168	FILTER	
L1018	J0JJC0000022	EMI FILTER	
L1028	J0JJC0000022	EMI FILTER	LB60NTU/E/EA, LB55NTE/EA
L1030	J0JJC0000022	EMI FILTER	
L1031	J0JCC0000168	FILTER	
L1032	J0JJC0000022	EMI FILTER	
L1033	ELJFA470JFB	COIL	
L1034	J0JCC0000168	FILTER	
L1035	J0JCC0000168	FILTER	
L1036	ELJFA6R8JFB	COIL	
L1037	ELJFA470JFB	COIL	
L1038	J0JJC0000022	EMI FILTER	
L1039	J0JJC0000022	EMI FILTER	
L1040	J0JJC0000022	EMI FILTER	
L1042	J0JJC0000022	EMI FILTER	
L1043	J0JJC0000022	EMI FILTER	
L1044	J0JCC0000168	FILTER	
L1045	J0JJC0000022	EMI FILTER	
L1046	J0JJC0000022	EMI FILTER	
L1048	J0JJC0000022	EMI FILTER	
L1049	J0JJC0000022	EMI FILTER	
L1050	J0JCC0000168	FILTER	
L1066	J0JCC0000168	FILTER	
L1067	J0JCC0000168	FILTER	
L1068	J0JCC0000168	FILTER	
L1069	J0JCC0000168	FILTER	
L1070	J0JCC0000168	FILTER	
L1071	J0JCC0000168	FILTER	
L1072	J0JCC0000168	FILTER	
L1073	J0JCC0000168	FILTER	
L1074	J0JCC0000168	FILTER	
L1075	J0JCC0000168	FILTER	
L1076	J0JJC0000022	EMI FILTER	
L1077	J0JJC0000022	EMI FILTER	
L1080	J0JJC0000022	EMI FILTER	
L1081	J0JJC0000022	EMI FILTER	
L1082	J0JJC0000022	EMI FILTER	
L1083	J0JGC0000059	FILTER	
L1084	J0JGC0000059	FILTER	
L1085	J0JJC0000022	EMI FILTER	
L1086	J0JCC0000168	FILTER	
L1656	J0JCC0000168	FILTER	
L1801	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1802	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1803	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1804	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1805	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1806	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA
L1807	J0JHC0000107	CORE	LB60NTU/E/EA, LB55NTE/EA

Ref. No.	Part No.	Part Name & Description	Remarks
L4001	J0JCC0000168	FILTER	
L4002	J0JCC0000168	FILTER	
L4003	J0JCC0000168	FILTER	
L4004	J0JCC0000168	FILTER	
L4005	J0JCC0000168	FILTER	
L4006	J0JCC0000168	FILTER	
LF9101	G0B173H00001	FILTER	⚠
FL1001	J0HABB000014	FILTER	
FL1002	J0HABB000014	FILTER	
FL1003	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1004	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1005	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1006	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1007	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1008	EXB38V101J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
FL1801	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1802	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1803	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1804	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1805	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1806	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
FL1807	J0JAD0000012	CORE	LB60NTU/E/EA, LB55NTE/EA
		[RESISTORS]	
R1001	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1002	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1004	EXB28V473JX	RESISTOR	
R1005	ERJ3GEYJ1R5V	RESISTOR	
R1008	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1009	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1016	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1017	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1019	ERJ3GEYJ203V	RESISTOR	
R1021	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1022	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1025	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1027	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1029	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1030	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1039	ERJ2GEJ100	M 10 OHM, 0.063W	
R1041	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1042	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1043	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1044	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1047	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1048	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1051	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1052	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1053	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1054	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1055	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1056	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1057	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1058	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1059	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1060	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1061	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1064	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1065	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1071	ERJ6GEYJ750	M 75 OHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1072	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1073	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1078	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1079	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1081	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1082	ERJ3GEYJ822V	RESISTOR	
R1085	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1088	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1094	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1095	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1099	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1101	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1102	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1103	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1104	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1105	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1106	ERJ3GEYJ393V	RESISTOR	
R1107	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1108	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1109	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1110	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1111	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1112	ERJ1TYJ221	M 220 OHM, 1W	
R1113	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1115	ERJ2GEJ220	M 22 OHM, 0.063W	
R1117	ERJ2GEJ220	M 22 OHM, 0.063W	
R1118	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1119	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1120	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1121	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1122	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1123	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1124	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R1125	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1126	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1127	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1128	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1129	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1130	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1131	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R1132	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1133	ERJ2GEJ220	M 22 OHM, 0.063W	
R1134	ERJ2GEJ220	M 22 OHM, 0.063W	
R1137	ERJ2GEJ220	M 22 OHM, 0.063W	
R1138	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1140	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1141	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1142	ERJ3EKF2001V	RESISTOR	
R1143	ERJ3EKF2801	RESISTOR	
R1144	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1145	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1146	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1147	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1148	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1151	ERJ2GEJ220	M 22 OHM, 0.063W	
R1152	ERJ2GEJ220	M 22 OHM, 0.063W	
R1154	ERJ3EKF1001	M 1K OHM, 0.063W	
R1155	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1156	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1164	ERJ3EKF1371	M 1.37KOHM,0.063W	
R1167	ERJ3EKF2001V	RESISTOR	
R1168	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1169	ERJ2GEJ220	M 22 OHM, 0.063W	
R1170	ERJ3EKF3001	RESISTOR	
R1171	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1173	ERJ3EKF1691	M1.69KOHM, 1/16W	
R1174	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1177	ERJ2GEJ220	M 22 OHM, 0.063W	
R1178	ERJ2GEJ560	M 56 OHM, 0.063W	
R1179	ERJ2GEJ220	M 22 OHM, 0.063W	
R1180	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1183	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1184	ERJ2GEJ220	M 22 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1188	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1192	ERJ2GEJ330X	RESISTOR	
R1193	EXB28V560J	RESISTOR ARRAY	
R1194	EXB2HV560JV	RESISTOR	
R1195	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1197	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1198	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1199	ERJ3EKF2001V	RESISTOR	
R1200	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1203	ERJ3EKF3001	RESISTOR	
R1204	ERJ3EKF1201	RESISTOR	
R1206	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1210	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1211	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1212	EXB2HV560JV	RESISTOR	
R1213	EXB28V560J	RESISTOR ARRAY	
R1214	ERJ2GEJ220	M 22 OHM, 0.063W	
R1218	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1219	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1221	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1222	ERJ3EKF1002	M 10KOHM, 1/16W	
R1223	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1224	ERJ3EKF1003	M 100KOHM, 1/16W	
R1225	ERJ3EKF3602	RESISTOR	
R1266	EXB28V560J	RESISTOR ARRAY	
R1272	ERJ2GEJ102	M 1K OHM, 0.063W	
R1282	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1285	ERJ2GEJ203	M 20KOHM, 0.063W	
R1286	ERJ2GEJ750	M 75 OHM, 0.063W	
R1290	ERJ3GEYJ301	M 300 OHM,J,1/16W	
R1291	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1295	ERJ3EKF8201	RESISTOR	
R1299	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1300	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1301	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1304	ERJ2GEJ103	M 10K OHM, 0.063W	
R1305	ERJ3EKF1473	M 147KOHM, 0.063W	
R1306	ERJ3EKF1002	M 10KOHM, 1/16W	
R1308	ERJ3EKF1004	RESISTOR	
R1309	ERJ2GEJ103	M 10K OHM, 0.063W	
R1310	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1311	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1312	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1313	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1314	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1315	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1322	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1323	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1324	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1328	EXB2HV103JV	RESISTOR	
R1331	ERJ2GEJ105	M 1M OHM, 0.063W	
R1333	EXB28V103J	RESISTOR ARRAY	
R1339	ERJ2GEJ103	M 10K OHM, 0.063W	
R1340	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1346	ERJ2GEJ103	M 10K OHM, 0.063W	
R1355	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1356	ERJ2GEJ103	M 10K OHM, 0.063W	
R1357	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1358	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1360	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1362	ERJ6GEYJ102	M 1K OHM,J,1/10W	
R1365	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1367	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1368	ERJ3EKF2202	RESISTOR	
R1369	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1370	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1372	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1390	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1391	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1392	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1394	EXB2HV220JV	RESISTOR	
R1401	EXB28V220J	RESISTOR ARRAY	
R1402	ERJ2GEJ101X	M 100 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1403	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1404	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1405	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1407	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1408	ERJ2GEJ331	M 330 OHM, 0.063W	
R1409	ERJ2GEJ220	M 22 OHM, 0.063W	
R1410	ERJ2GEJ331	M 330 OHM, 0.063W	
R1411	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R1412	ERJ3EKF1002	M 10KOHM, 1/16W	
R1413	ERJ3EKF1002	M 10KOHM, 1/16W	
R1419	ERJ2GEJ473	M 47K OHM, 0.063W	
R1420	ERJ2GEJ473	M 47K OHM, 0.063W	
R1421	ERJ2GEJ473	M 47K OHM, 0.063W	
R1426	ERJ2GEJ221	M 22 OHM, 0.063W	
R1430	ERJ1TYJ221	M 220 OHM, 1W	
R1431	ERJ1TYJ221	M 220 OHM, 1W	
R1441	ERJ2GEJ104	M 100KOHM, 0.063W	
R1442	ERJ2GEJ104	M 100KOHM, 0.063W	
R1443	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1444	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1445	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1446	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1447	ERJ2GEJ560	M 56 OHM, 0.063W	
R1451	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1453	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1454	ERJ3GEYJ274	M 270 OHM,J,1/16W	
R1455	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1471	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1472	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1520	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1521	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1522	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1525	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1526	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1527	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1528	ERJ2GEJ681	M 680 OHM, 0.063W	
R1530	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R1531	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1532	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R1533	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1534	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R1535	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1537	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1539	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1542	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1543	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1548	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1549	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1569	EXB2HV220JV	RESISTOR	
R1570	EXB2HV220JV	RESISTOR	
R1571	EXB2HV220JV	RESISTOR	
R1574	EXB2HV220JV	RESISTOR	
R1575	EXB2HV220JV	RESISTOR	
R1578	ERJ2GEJ560	M 56 OHM, 0.063W	
R1579	ERJ2GEJ681	M 680 OHM, 0.063W	
R1581	ERJ2GEJ331	M 330 OHM, 0.063W	
R1582	ERJ2GEJ331	M 330 OHM, 0.063W	
R1583	ERJ2GEJ331	M 330 OHM, 0.063W	
R1584	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1587	ERJ2GEJ221	M 220 OHM, 0.063W	
R1591	ERJ2GEJ221	M 220 OHM, 0.063W	
R1592	ERJ2GEJ272	M 2.7KOHM, 0.063W	
R1593	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1594	ERJ2GEJ103	M 10K OHM, 0.063W	
R1595	EXB2HV103JV	RESISTOR	
R1600	EXB2HV220JV	RESISTOR	
R1603	EXB28V220J	RESISTOR ARRAY	
R1605	EXB2HV220JV	RESISTOR	
R1607	ERJ2GEJ220	M 22 OHM, 0.063W	
R1608	ERJ2GEJ103	M 10K OHM, 0.063W	
R1609	ERJ2GEJ331	M 330 OHM, 0.063W	
R1610	ERJ2GEJ220	M 22 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1611	ERJ2GEJ220	M 22 OHM, 0.063W	
R1612	ERJ2GEJ220	M 22 OHM, 0.063W	
R1613	ERJ2GEJ102	M 1K OHM, 0.063W	
R1614	ERJ2GEJ220	M 22 OHM, 0.063W	
R1616	EXB2HV220JV	RESISTOR	
R1619	EXB2HV220JV	RESISTOR	
R1620	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1621	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1622	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1623	ERJ2GEJ220	M 22 OHM, 0.063W	
R1626	ERJ2GEJ220	M 22 OHM, 0.063W	
R1628	ERJ2GEJ681	M 680 OHM, 0.063W	
R1631	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1633	EXB2HV560JV	RESISTOR	
R1635	EXB2HV560JV	RESISTOR	
R1637	EXB2HV560JV	RESISTOR	
R1638	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1639	EXB2HV560JV	RESISTOR	
R1640	ERJ2GEJ681	M 680 OHM, 0.063W	
R1641	ERJ2GEJ220	M 22 OHM, 0.063W	
R1642	ERJ2GEJ220	M 22 OHM, 0.063W	
R1645	ERJ2GEJ220	M 22 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1650	EXB28V103J	RESISTOR ARRAY	
R1652	ERJ2GEJ220	M 22 OHM, 0.063W	
R1656	ERJ2GEJ681	M 680 OHM, 0.063W	
R1657	ERJ2GEJ681	M 680 OHM, 0.063W	
R1666	ERJ2GEJ103	M 10K OHM, 0.063W	
R1667	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1668	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1669	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1672	ERJ2GEJ103	M 10K OHM, 0.063W	
R1673	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1674	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1675	ERJ2GEJ102	M 1K OHM, 0.063W	
R1676	ERJ3EKF2202	RESISTOR	
R1677	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1678	EXB2HV220J		LB60U/EA, LB55EA
R1679	EXB2HV220J		LB60U/EA, LB55EA
R1680	EXB2HV220J		LB60U/EA, LB55EA
R1681	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1682	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60U/EA, LB55EA
R1683	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60U/EA, LB55EA
R1689	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1692	ERJ1TYJ221	M 220 OHM, 1W	
R1693	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1694	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1695	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1696	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1697	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1698	ERJ3GEYJ820V	RESISTOR	
R1700	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1701	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1702	ERJ2GEJ221	M 220 OHM, 0.063W	
R1703	ERJ2GEJ220	M 22 OHM, 0.063W	
R1705	ERJ6GEY0R00V	M 0 OHM,J,1/10W	
R1801	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1802	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1803	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1804	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1805	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1806	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1807	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA

Ref. No.	Part No.	Part Name & Description	Remarks
R1808	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1809	ERJ3GEY0R00	M 0 OHM, 1/16W	LB60NTU/E/EA, LB55NTE/EA
R1813	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1815	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1816	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1817	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1818	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1820	ERJ3GEYJ330	M 33 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1824	ERJ3GEYJ470	M 47 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1826	ERJ3GEYJ560	M 56 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1827	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1832	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1833	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1834	EXB28V103J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1835	ERJ2GEJ680X	M 68 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA (ERJ2RMJ680X)
R1839	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1840	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1843	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1844	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1845	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1847	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1848	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1849	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1850	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1852	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1855	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1856	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1861	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1864	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1865	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1866	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1867	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1868	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1869	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1870	ERJ3GEYJ102	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1871	EXB2HV100JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1872	EXB2HV100JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1873	EXB2HV100JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1874	EXB2HV100JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1875	EXB2HV220JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1876	EXB2HV220JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1877	EXB28V100J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1878	EXB2HV220JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1888	ERJ3GEYJ100	M 10 OHM,J, 1/16W	LB60NTU/E/EA, LB55NTE/EA
R1889	ERJ3GEYJ102	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1890	ERJ6ENF4020	M 402 OHM, 1/10W	LB60NTU/E/EA, LB55NTE/EA
R1891	ERJ6ENF1001	M 1KOHM, 1/10W	LB60NTU/E/EA, LB55NTE/EA
R1892	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1893	EXB28V104J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1894	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1895	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1896	EXB28V103J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1897	ERJ2GEJ103	M 10K OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1898	EXB28V472J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1900	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R1901	EXB2HV220JV	RESISTOR	LB60NTU/E/EA, LB55NTE/EA
R1903	EXB28V220J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1904	EXB28V103J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1905	EXB28V220J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1907	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1914	EXB28V220J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1916	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1917	EXB28V220J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1918	EXB28V103J	RESISTOR ARRAY	LB60NTU/E/EA, LB55NTE/EA
R1919	ERJ3GEYJ473	M 47K OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1920	ERJ3GEYJ473	M 47K OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1921	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1922	ERJ3GEYJ220	M 22 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA (ERJ3GEYJ680V)
R1923	ERJ3GEYJ680	M 68 OHM,J,1/16W	LB60NTU/E/EA, LB55NTE/EA
R1932	ERJ2GE0R00X	M 0 OHM, 0.063W	LB60NTU/E/EA, LB55NTE/EA
R3001	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R3002	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R3003	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R3004	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R3005	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R3006	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R3007	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R3008	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R3009	ERJ8GEYJ751	M 750 OHM, J,1/4W	
R3010	ERJ3GEYJ121	M 120 OHM,J,1/16W	
R3011	ERJ3GEYJ151	M 150 OHM,J,1/16W	
R3012	ERJ3GEYJ121	M 120 OHM,J,1/16W	
R3013	ERJ3GEYJ151	M 150 OHM,J,1/16W	
R3014	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R3015	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R3016	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R3024	ERJ8GEYJ751	M 750 OHM, J,1/4W	

Ref. No.	Part No.	Part Name & Description	Remarks
R3025	ERJ3GEY0R00	M 0 OHM, 1/16W	
R3026	ERJ3GEY0R00	M 0 OHM, 1/16W	
R3501	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R3502	ERJ3EKF2201	RESISTOR	
R3503	ERJ3EKF1001	M 1K OHM, 0.063W	
R3504	ERJ3EKF1002	M 10KOHM, 1/16W	
R3505	ERJ3EKF1002	M 10KOHM, 1/16W	
R3506	ERJ3EKF2201	RESISTOR	
R3507	ERJ3EKF1003	M 100KOHM, 1/16W	
R3508	ERJ3EKF2201	RESISTOR	
R3509	ERJ3EKF1001	M 1K OHM, 0.063W	
R4001	EXB28V473JX	RESISTOR	
R4002	EXB28V124JX	RESISTOR	
R4003	EXB28V154JX	RESISTOR	
R4004	EXB28V102J	RESISTOR ARRAY	
R4007	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R4008	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R4009	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R4010	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R4011	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R4015	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R4016	EXB28V124JX	RESISTOR	
R4017	EXB28V154JX	RESISTOR	
R9101	ERDS1TJ474	C 4.7KOHM, J,1/2W	⚠
R9102	D0A1825JA015	RESISTOR	⚠
R9601	ERX2SJR47E	M 0.47OHM,J, 2W	
R9630	ERJ14YJ3R3U	M 3.3 OHM,J, 1/4W	
R9631	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9632	ERJ14YJ5R6U	M 5.6 OHM,J, 1/4W	
R9633	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9634	ERJ8GEYJ120	RESISTOR	
R9636	ERJ14YJ3R3U	M 3.3 OHM,J, 1/4W	
R9637	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9638	ERJ14YJ5R6U	M 5.6 OHM,J, 1/4W	
R9639	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9640	ERJ8GEYJ120	RESISTOR	
R9653	D0XGR22J0004	RESISTOR	
[CAPACITORS]			
C1001	EEEHB0J221UP	E 330UF, 6.3V	
C1002	ECJ0EB1C103K	C 0.01UF, 16V	
C1003	EEEHB0J221UP	E 330UF, 6.3V	
C1004	ECJ0EB1C103K	C 0.01UF, 16V	
C1005	EEEHB0J221UP	E 330UF, 6.3V	
C1006	ECJ0EB1C103K	C 0.01UF, 16V	
C1007	ECJ0EF1C104Z	C 0.1UF, 16V	
C1008	ECJ1VB1H472K	C 4700PF, K, 50V	
C1009	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1010	F2G0J3300014	CAPACITOR	
C1011	ECJ0EF1C104Z	C 0.1UF, 16V	
C1012	F2G0J3300014	CAPACITOR	
C1013	F2G0J1010052	CAPACITOR	
C1014	ECJ0EF1C104Z	C 0.1UF, 16V	
C1015	ECJ0EF1C104Z	C 0.1UF, 16V	
C1016	ECJ0EB1C103K	C 0.01UF, 16V	
C1017	ECJ0EF1C104Z	C 0.1UF, 16V	
C1018	ECJ0EB1C103K	C 0.01UF, 16V	
C1019	ECJ0EB1H102K	C 1000PF, 50V	
C1021	ECJ0EF1C104Z	C 0.1UF, 16V	
C1022	ECJ0EB1C103K	C 0.01UF, 16V	
C1023	ECJ0EF1C104Z	C 0.1UF, 16V	
C1024	ECJ0EF1C104Z	C 0.1UF, 16V	
C1027	ECJ0EF1C104Z	C 0.1UF, 16V	
C1029	ECJ0EF1C104Z	C 0.1UF, 16V	
C1032	ECJ0EF1C104Z	C 0.1UF, 16V	
C1033	ECJ0EF1C104Z	C 0.1UF, 16V	
C1035	ECJ0EF1C104Z	C 0.1UF, 16V	
C1036	F2G0J3300014	CAPACITOR	
C1037	ECJ0EB1C103K	C 0.01UF, 16V	
C1038	F2G0J3300014	CAPACITOR	
C1039	ECJ0EB1C103K	C 0.01UF, 16V	
C1040	F2G0J3300014	CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1041	ECJ0EB1C103K	C 0.01UF, 16V	
C1047	ECJ1VF1A225Z	CAPACITOR	
C1048	ECJ0EB1H102K	C 1000PF, 50V	
C1049	ECJ1VF1A225Z	CAPACITOR	
C1050	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1051	ECJ0EF1C104Z	C 0.1UF, 16V	
C1052	ECJ0EF1C104Z	C 0.1UF, 16V	
C1053	ECJ0EF1C104Z	C 0.1UF, 16V	
C1054	ECJ0EF1C104Z	C 0.1UF, 16V	
C1072	F2G1C4700014	CAPACITOR	
C1075	ECJ2FF1A106Z	C 10UF, 10V	
C1076	ECJ2FF1A106Z	C 10UF, 10V	
C1077	ECJ0EF1C104Z	C 0.1UF, 16V	
C1078	ECJ0EF1C104Z	C 0.1UF, 16V	
C1079	ECJ0EB1C103K	C 0.01UF, 16V	
C1080	ECJ2FF1A106Z	C 10UF, 10V	
C1081	ECJ2FF1A106Z	C 10UF, 10V	
C1082	ECJ0EF1C104Z	C 0.1UF, 16V	
C1083	ECJ0EF1C104Z	C 0.1UF, 16V	
C1084	ECJ2FF1A106Z	C 10UF, 10V	
C1085	ECJ0EF1C104Z	C 0.1UF, 16V	
C1086	ECJ0EB1C103K	C 0.01UF, 16V	
C1087	ECJ0EF1C104Z	C 0.1UF, 16V	
C1088	ECJ0EF1C104Z	C 0.1UF, 16V	
C1089	ECJ0EF1C104Z	C 0.1UF, 16V	
C1090	ECJ0EF1C104Z	C 0.1UF, 16V	
C1091	ECJ0EF1C104Z	C 0.1UF, 16V	
C1092	ECJ0EF1C104Z	C 0.1UF, 16V	
C1093	ECJ0EB1H102K	C 1000PF, 50V	
C1094	ECJ2FF1A106Z	C 10UF, 10V	
C1095	ECJ0EF1C104Z	C 0.1UF, 16V	
C1096	ECJ0EF1C104Z	C 0.1UF, 16V	
C1097	ECJ0EF1C104Z	C 0.1UF, 16V	
C1098	ECJ0EF1C104Z	C 0.1UF, 16V	
C1100	ECJ2FF1C475Z	CAPACITOR	
C1101	ECJ0EF1C104Z	C 0.1UF, 16V	
C1102	ECJ0EF1C104Z	C 0.1UF, 16V	
C1103	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1104	F2G1C4700014	CAPACITOR	
C1105	ECJ0EB1H102K	C 1000PF, 50V	
C1106	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1107	ECJ0EF1C104Z	C 0.1UF, 16V	
C1108	ECJ0EF1C104Z	C 0.1UF, 16V	
C1109	ECJ1VB1C823K	C 0.82UF, 16V	
C1110	ECJ0EB1C103K	C 0.01UF, 16V	
C1111	ECJ1VF1A225Z	CAPACITOR	
C1112	ECJ0EF1C104Z	C 0.1UF, 16V	
C1113	ECJ0EB1C103K	C 0.01UF, 16V	
C1114	ECJ0EF1C104Z	C 0.1UF, 16V	
C1115	ECJ0EF1C104Z	C 0.1UF, 16V	
C1116	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1117	ECJ0EF1C104Z	C 0.1UF, 16V	
C1119	ECJ0EF1C104Z	C 0.1UF, 16V	
C1120	ECJ2FF1A106Z	C 10UF, 10V	
C1121	ECJ0EF1C104Z	C 0.1UF, 16V	
C1122	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1123	ECJ0EF1C104Z	C 0.1UF, 16V	
C1124	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1125	ECJ0EF1C104Z	C 0.1UF, 16V	
C1126	ECJ2FF1A106Z	C 10UF, 10V	
C1127	ECJ0EF1C104Z	C 0.1UF, 16V	
C1128	EEFCD0D101R	CAPACITOR	
C1129	ECJ0EB1H102K	C 1000PF, 50V	
C1130	ECJ0EB1H102K	C 1000PF, 50V	
C1131	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1132	ECJ1VF1A225Z	CAPACITOR	
C1133	ECJ0EF1C104Z	C 0.1UF, 16V	
C1134	ECJ0EF1C104Z	C 0.1UF, 16V	
C1135	ECJ0EF1C104Z	C 0.1UF, 16V	
C1136	ECJ0EF1C104Z	C 0.1UF, 16V	
C1137	F2G0J1010052	CAPACITOR	
C1138	ECJ0EF1C104Z	C 0.1UF, 16V	
C1139	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1140	ECJ0EF1C104Z	C 0.1UF, 16V	
C1141	ECJ1VF1A225Z	CAPACITOR	
C1143	F2G1C4700014	CAPACITOR	
C1144	ECJ2FF1A106Z	C 10UF, 10V	
C1145	ECJ0EF1C104Z	C 0.1UF, 16V	
C1146	F2G1C4700014	CAPACITOR	
C1150	ECJ0EF1C104Z	C 0.1UF, 16V	
C1152	ECJ0EF1C104Z	C 0.1UF, 16V	
C1168	ECJ0EF1C104Z	C 0.1UF, 16V	
C1172	ECJ0EF1C104Z	C 0.1UF, 16V	
C1178	ECJ0EF1C104Z	C 0.1UF, 16V	
C1185	ECJ0EF1C104Z	C 0.1UF, 16V	
C1189	ECJ0EF1C104Z	C 0.1UF, 16V	
C1199	ECJ2FF1A106Z	C 10UF, 10V	
C1201	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1202	ECJ0EF1C104Z	C 0.1UF, 16V	
C1204	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1206	ECJ0EF1C104Z	C 0.1UF, 16V	
C1207	ECJ0EF1C104Z	C 0.1UF, 16V	
C1208	ECJ0EF1C104Z	C 0.1UF, 16V	
C1209	ECJ0EF1C104Z	C 0.1UF, 16V	
C1210	ECJ1VF1H333Z	C 0.033UF, 50V	
C1212	ECJ0EF1C104Z	C 0.1UF, 16V	
C1216	ECJ0EF1C104Z	C 0.1UF, 16V	
C1217	ECJ1VC1H471J	C 470PF, J, 50V	
C1219	ECJ1VC1H100C	C 10PF, 50V	
C1220	ECJ0EB1H102K	C 1000PF, 50V	
C1221	ECJ1VC1H100C	C 10PF, 50V	
C1222	ECJ0EF1C104Z	C 0.1UF, 16V	
C1224	F2G0J4700024	CAPACITOR	
C1225	ECJ0EF1C104Z	C 0.1UF, 16V	
C1226	ECJ0EF1C104Z	C 0.1UF, 16V	
C1228	ECJ0EF1C104Z	C 0.1UF, 16V	
C1229	ECJ0EF1C104Z	C 0.1UF, 16V	
C1230	F2G0J4700010	CAPACITOR	
C1242	F2G0J1010052	CAPACITOR	
C1243	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1244	F2G1E3300010	CAPACITOR	
C1245	F2G1E3300010	CAPACITOR	
C1246	ECJ0EB1C103K	C 0.01UF, 16V	
C1247	ECJ0EF1C104Z	C 0.1UF, 16V	
C1248	ECJ0EB1C103K	C 0.01UF, 16V	
C1249	ECJ0EF1C104Z	C 0.1UF, 16V	
C1250	ECJ0EB1C103K	C 0.01UF, 16V	
C1251	ECJ0EF1C104Z	C 0.1UF, 16V	
C1252	F1J1E105A197	CAPACITOR	
C1253	ECJ0EF1C104Z	C 0.1UF, 16V	
C1254	ECJ0EF1C104Z	C 0.1UF, 16V	
C1255	ECJ0EF1C104Z	C 0.1UF, 16V	
C1256	ECJ0EF1C104Z	C 0.1UF, 16V	
C1257	ECJ0EF1C104Z	C 0.1UF, 16V	
C1258	ECJ0EF1C104Z	C 0.1UF, 16V	
C1259	ECJ0EF1C104Z	C 0.1UF, 16V	
C1260	ECJ0EF1C104Z	C 0.1UF, 16V	
C1261	ECJ0EF1C104Z	C 0.1UF, 16V	
C1262	ECJ0EF1C104Z	C 0.1UF, 16V	
C1263	ECJ0EF1C104Z	C 0.1UF, 16V	
C1264	ECJ0EF1C104Z	C 0.1UF, 16V	
C1265	ECJ0EF1C104Z	C 0.1UF, 16V	
C1266	ECJ0EF1C104Z	C 0.1UF, 16V	
C1267	ECJ0EF1C104Z	C 0.1UF, 16V	
C1268	ECJ0EF1C104Z	C 0.1UF, 16V	
C1269	ECJ0EF1C104Z	C 0.1UF, 16V	
C1270	ECJ0EF1C104Z	C 0.1UF, 16V	
C1271	ECJ0EF1C104Z	C 0.1UF, 16V	
C1272	ECJ0EF1C104Z	C 0.1UF, 16V	
C1273	ECJ0EF1C104Z	C 0.1UF, 16V	
C1274	ECJ0EF1C104Z	C 0.1UF, 16V	
C1275	ECJ0EF1C104Z	C 0.1UF, 16V	
C1276	ECJ0EF1C104Z	C 0.1UF, 16V	
C1277	ECJ0EF1C104Z	C 0.1UF, 16V	
C1278	ECJ0EF1C104Z	C 0.1UF, 16V	
C1279	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1280	ECJ0EF1C104Z	C 0.1UF, 16V	
C1281	ECJ0EF1C104Z	C 0.1UF, 16V	
C1282	ECJ0EF1C104Z	C 0.1UF, 16V	
C1283	ECJ0EF1C104Z	C 0.1UF, 16V	
C1284	ECJ0EF1C104Z	C 0.1UF, 16V	
C1285	ECJ0EF1C104Z	C 0.1UF, 16V	
C1286	F2G1E3300022	CAPACITOR	
C1306	ECJ0EF1C104Z	C 0.1UF, 16V	
C1329	F1J1E105A197	CAPACITOR	
C1330	F1J1E105A197	CAPACITOR	
C1331	F1J1E105A197	CAPACITOR	
C1332	F2G1E3300022	CAPACITOR	
C1333	F2G1E3300010	CAPACITOR	
C1334	F2G1E3300022	CAPACITOR	
C1335	F2G1A3300007	CAPACITOR	
C1336	F2G1E3300036	CAPACITOR	
C1337	F2G1E3300036	CAPACITOR	
C1341	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1342	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1343	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1360	ECJ2FF1C475Z	CAPACITOR	
C1361	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1362	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1363	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1364	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1365	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1500	ECJ0EF1C104Z	C 0.1UF, 16V	
C1501	ECJ0EF1C104Z	C 0.1UF, 16V	
C1502	ECJ0EF1C104Z	C 0.1UF, 16V	
C1503	ECJ0EF1C104Z	C 0.1UF, 16V	
C1504	ECJ0EF1C104Z	C 0.1UF, 16V	
C1505	ECJ0EF1C104Z	C 0.1UF, 16V	
C1506	ECJ0EF1C104Z	C 0.1UF, 16V	
C1507	ECJ0EF1C104Z	C 0.1UF, 16V	
C1508	ECJ0EF1C104Z	C 0.1UF, 16V	
C1509	ECJ0EF1C104Z	C 0.1UF, 16V	
C1510	ECJ0EF1C104Z	C 0.1UF, 16V	
C1511	ECJ0EF1C104Z	C 0.1UF, 16V	
C1512	ECJ0EF1C104Z	C 0.1UF, 16V	
C1513	ECJ0EF1C104Z	C 0.1UF, 16V	
C1514	ECJ0EF1C104Z	C 0.1UF, 16V	
C1515	ECJ0EF1C104Z	C 0.1UF, 16V	
C1516	ECJ0EF1C104Z	C 0.1UF, 16V	
C1517	ECJ0EB1C103K	C 0.01UF, 16V	
C1518	ECJ0EF1C104Z	C 0.1UF, 16V	
C1519	ECJ0EF1C104Z	C 0.1UF, 16V	
C1520	ECJ0EF1C104Z	C 0.1UF, 16V	
C1521	ECJ0EF1C104Z	C 0.1UF, 16V	
C1522	ECJ0EF1C104Z	C 0.1UF, 16V	
C1523	ECJ0EF1C104Z	C 0.1UF, 16V	
C1524	ECJ0EF1C104Z	C 0.1UF, 16V	
C1525	ECJ0EF1C104Z	C 0.1UF, 16V	
C1526	ECJ0EF1C104Z	C 0.1UF, 16V	
C1527	ECJ0EF1C104Z	C 0.1UF, 16V	
C1528	ECJ0EF1C104Z	C 0.1UF, 16V	
C1529	ECJ0EF1C104Z	C 0.1UF, 16V	
C1530	ECJ0EF1C104Z	C 0.1UF, 16V	
C1531	ECJ0EF1C104Z	C 0.1UF, 16V	
C1532	ECJ0EF1C104Z	C 0.1UF, 16V	
C1533	ECJ0EF1C104Z	C 0.1UF, 16V	
C1534	ECJ0EF1C104Z	C 0.1UF, 16V	
C1535	ECJ0EF1C104Z	C 0.1UF, 16V	
C1539	F1J1E105A197	CAPACITOR	
C1541	ECJ2FF1A106Z	C 10UF, 10V	
C1542	F2G0J1010052	CAPACITOR	
C1543	F2G1A221A030	CAPACITOR	
C1544	ECJ0EF1C104Z	C 0.1UF, 16V	
C1601	ECJ0EF1C104Z	C 0.1UF, 16V	
C1602	ECJ0EF1C104Z	C 0.1UF, 16V	
C1603	ECJ0EF1C104Z	C 0.1UF, 16V	
C1604	ECJ0EF1C104Z	C 0.1UF, 16V	
C1605	ECJ0EF1C104Z	C 0.1UF, 16V	
C1606	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1607	ECJ0EF1C104Z	C 0.1UF, 16V	
C1608	ECJ0EF1C104Z	C 0.1UF, 16V	
C1609	ECJ0EF1C104Z	C 0.1UF, 16V	
C1610	ECJ0EF1C104Z	C 0.1UF, 16V	
C1611	ECJ0EF1C104Z	C 0.1UF, 16V	
C1613	ECJ0EF1C104Z	C 0.1UF, 16V	
C1614	ECJ0EF1C104Z	C 0.1UF, 16V	
C1615	ECJ0EF1C104Z	C 0.1UF, 16V	
C1616	ECJ0EF1C104Z	C 0.1UF, 16V	
C1617	ECJ0EF1C104Z	C 0.1UF, 16V	
C1618	ECJ0EF1C104Z	C 0.1UF, 16V	
C1619	ECJ0EF1C104Z	C 0.1UF, 16V	
C1620	ECJ0EF1C104Z	C 0.1UF, 16V	
C1621	ECJ0EF1C104Z	C 0.1UF, 16V	
C1623	ECJ0EF1C104Z	C 0.1UF, 16V	
C1624	ECJ0EF1C104Z	C 0.1UF, 16V	
C1629	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1637	ECJ0EF1C104Z	C 0.1UF, 16V	
C1639	ECJ0EF1C104Z	C 0.1UF, 16V	
C1640	ECJ0EF1C104Z	C 0.1UF, 16V	
C1641	ECJ2FF1A106Z	C 10UF, 10V	
C1642	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1644	ECJ0EF1C104Z	C 0.1UF, 16V	
C1645	ECJ0EF1C104Z	C 0.1UF, 16V	
C1646	ECJ1VC1H330J	CAPACITOR	
C1647	ECJ1VC1H330J	CAPACITOR	
C1801	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1802	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1803	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1804	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1805	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1816	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1817	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1818	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1819	ECJ1VC1H101J	C 100PF, J, 50V	LB60NTU/E/EA, LB55NTE/EA
C1820	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1821	ECJ1VB1C104K	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1822	EEFCD0D101R	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1823	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1824	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1825	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1826	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1827	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1828	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1829	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1830	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1831	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1832	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1833	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1834	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1835	ECJ1VB0J105K	C 1UF,Z, 6.3V	LB60NTU/E/EA, LB55NTE/EA
C1836	F2G0J4700024	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1837	F2G0J4700024	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1838	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1839	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1840	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1841	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1842	ECJ1VB0J474K	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1843	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1844	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1845	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1846	F1J0J106A013	CAPACITOR	LB60NTU/E/EA, LB55NTE/EA
C1847	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1861	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1862	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1863	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1864	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1865	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1866	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1867	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1868	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1869	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1870	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1871	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1872	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C1873	ECJ0EF1C104Z	C 0.1UF, 16V	LB60NTU/E/EA, LB55NTE/EA
C3001	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3002	ECJ0EF1C104Z	C 0.1UF, 16V	
C3003	ECJ0EF1C104Z	C 0.1UF, 16V	
C3004	F2G0J4700010	CAPACITOR	
C3501	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3502	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C4001	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4002	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4003	ECJ2FF1A106Z	C 10UF, 10V	
C4004	ECJ1VB1H472K	C 4700PF, K, 50V	
C4005	ECJ2FF1A106Z	C 10UF, 10V	
C4006	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C4007	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4008	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4009	ECJ0EF1C104Z	C 0.1UF, 16V	
C5001	F4DB04740001	CAPACITOR	
C9101	ECQU2A334MLA	CAPACITOR	⚠
C9102	F1BAH102A024	CAPACITOR	⚠
C9103	F1BAH102A024	CAPACITOR	⚠
C9104	ECQU2A224MLA	P 0.22UF, M,250V	⚠
C9603	F0CZZ4740002	CAPACITOR	
C9610	F0C2E1050002	CAPACITOR	
C9617	F0C3C4720003	CAPACITOR	
C9618	F0C2J1540004	CAPACITOR	
C9619	F0C2J1540004	CAPACITOR	
[OTHERS]			
A1	K1MY30BA0006	CONNECTOR	
A2	K1MY30BA0006	CONNECTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
A3	K1MY30BA0006	CONNECTOR	
A4	K1KA07BA0014	7P CONNECTOR	
A5	K1KA03BA0014	3P CONNECTOR	
A6	K1KA12BA0059	12P CONNECTOR	
A8	K1MY14BA0008	14P CONNECTOR	
A9	K1KB05AA0065	5P CONNECTOR	
A10	K1KA02BA0047	2P CONNECTOR	
A11	K1KA02BA0047	2P CONNECTOR	
A12	K1KA02BA0047	2P CONNECTOR	
A13	K1MY50BA0106	CONNECTOR	LB60NTU/E/EA, LB55NTE/EA
A15	K1KA03BA0047	3P CONNECTOR	
A16	K1KA03BA0014	3P CONNECTOR	
A17	K1KA04BA0014	4P CONNECTOR	
A18	K1KA03BA0014	3P CONNECTOR	
A19	K1KA04BA0047	4P CONNECTOR	
A20	K1MN14AA0041	14P CONNECTOR	
G1	K1MN14A00081	14P CONNECTOR	
S2	K1MN14BA0116	14P CONNECTOR	
S3	K1KA05B00150	5P CONNECTOR	
WL1	K1NA09E00062	SD CARD SLOT	LB60NTU/E/EA, LB55NTE/EA
WL2	K1MY50BA0106	CONNECTOR	LB60NTU/E/EA, LB55NTE/EA
WL3	K1KA10BA0014	10P CONNECTOR	LB60NTU/E/EA, LB55NTE/EA
CF1001	D4CC1103A037	THERMISTOR	
CF3001	D4CC1103A037	THERMISTOR	
F9101-1	EYF52BCY	FUSE HOLDER	
F9101-2	EYF52BCY	FUSE HOLDER	
F9101	K5D632BNA005	FUSE	⚠
JK1001	K1AY205B0001	S-VIDEO/VIDEO IN TERMINAL	
JK1002	K1FY108B0001	RS232C I/F TERMINAL	
JK1003	K2HA2YYB0001	AUDIO IN TERMINAL	
JK1004	K1FB115B0103	RGB IN 1 TERMINAL	
JK1005	K1FB115B0102	RGB IN 2/OUT TERMINAL	
JK4001	K2HC1YYB0006	TERMINAL	
JK4002	K2HC1YYB0005	TERMINAL	
JK4003	K2HC1YYB0006	TERMINAL	
JK9101	K2AZ3B000002	TERMINAL	⚠
JS1003	ERJ6GEY0R00V	RESISTOR	
JS1004	ERJ6GEY0R00V	RESISTOR	
JS1005	ERJ6GEY0R00V	RESISTOR	
JS1006	ERJ6GEY0R00V	RESISTOR	
JS1007	ERJ6GEY0R00V	RESISTOR	
PC3001	B3JB00000023	PROTECT	
RM3001	B3RAD0000126	REMOTE CONTROL RECEIVER	
S9602	A9BZ00000013	SPARK GAP	
SW3001	EVQPLHA15	SWITCH	
SW3002	EVQPLHA15	SWITCH	
SW3003	EVQPLHA15	SWITCH	
SW3501	EVQPLHA15	SWITCH	
SW3502	EVQWHA50K	SWITCH	
SW9601	T115AR3U3	SWITCH	⚠
T9604	G4F3A0000004	TRANS	⚠
X1001	H0J270500105	CRYSTAL	
X1003	H0J983400016	CRYSTAL	
X1801	H1A6605B0008	CRYSTAL	LB60NTU/E/EA, LB55NTE/EA
X1802	H1A1225B0015	CRYSTAL	LB60NTU/E/EA, LB55NTE/EA
ZA9101	TJEA090	EARTH LUG	
RTL	TNPA3876	CIRCCUIT BOARD WL	LB60NTU/E/EA, LB55NTE/EA
RTL	TNPA3879	CIRCUIT BOARD S1	
RTL	TNPA3880	CIRCUIT BOARD S2	
RTL	TNPA3881	CIRCUIT BOARD G	
RTL	TNPA3913	CIRCUIT BOARD Z	
RTL	TXANP01VKB7	CIRCUIT BOARD A	LB60NTU/E/EA, LB55NTE/EA
	TXANP01QBYZ	CIRCUIT BOARD A	LB60U/EA, LB55EA
RTL	TXANP02VKA1	CIRCUIT BOARD K	

Ref. No.	Part No.	Part Name & Description	Remarks
	TXANP02VKB7	POWER UNIT ASSY	
	TXANP04VKA1	BALLAST UNIT ASSY	